Microsoft

Exam Questions 70-483

Programming in C#

NEW QUESTION 1
You are developing an application that includes a class named Order. The application will store a collection of Order objects.
The collection must meet the following requirements: Use strongly typed members.
Process Order objects in first-in-first-out order. Store values for each Order object.
Use zero-based indices.
You need to use a collection type that meets the requirements. Which collection type should you use?

A. Queue<T>
B. SortedList
C. LinkedList<T>
D. HashTable
E. Array<T>

Answer: A

Explanation: Queues are useful for storing messages in the order they were received for sequential processing. Objects stored in a Queue<T> are inserted at one end and removed from the other.
Reference: http://msdn.microsoft.com/en-us/library/7977ey2c.aspx

NEW QUESTION 2
You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 class Animal
02 {
03   public string Color { get; set; }
04   public string Name { get; set; }
05 }
06 private static IEnumerable<Animal> GetAnimals(string sqlConnectionString)
07 {
08   var animals = new List<Animal>();
09   SqlConnection sqlConnection = new SqlConnection(sqlConnectionString);
10   using (sqlConnection)
11   {
12     SqlCommand sqlCommand = new SqlCommand("SELECT Name, ColorName FROM Animals", sqlConnection);
13
14     using (SqlDataReader sqlDataReader = sqlCommand.ExecuteReader())
15     {
16
17       {
18         var animal = new Animal();
19         animal.Name = (string)sqlDataReader["Name"];
20         animal.Color = (string)sqlDataReader["ColorName"];
21         animals.Add(animal);
22       }
23     }
24   }
25   return customers;
26 }
```

The GetAnimals() method must meet the following requirements: Connect to a Microsoft SQL Server database.
Create Animal objects and populate them with data from the database. Return a sequence of populated Animal objects.
You need to meet the requirements.
Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Insert the following code segment at line 16: while(sqlDataReader.NextResult())
B. Insert the following code segment at line 13: sqlConnection.Open();
C. Insert the following code segment at line 13: sqlConnection.BeginTransaction();
D. Insert the following code segment at line 16: while(sqlDataReader.Read())
E. Insert the following code segment at line 16: while(sqlDataReader.GetValues())

Answer: BD

Explanation: B: SqlConnection.Open - Opens a database connection with the property settings specified by the ConnectionString.
Reference: http://msdn.microsoft.com/en-us/library/system.data.sqlclient.sqlconnection.open.aspx D: SqlDataReader.Read - Advances the SqlDataReader to the next record. Reference: http://msdn.microsoft.com/en-us/library/system.data.sqlclient.sqldatareader.read.aspx

NEW QUESTION 3
You are developing an application that uses the Microsoft ADO.NET Entity Framework to retrieve order information from a Microsoft SQL Server database. The application includes the following code. (Line numbers are included for reference only.)

```
01 public DateTime? OrderDate;
02 IQueryable<Order> LookupOrdersForYear(int year)
03 {
04   using (var context = new NorthwindEntities())
05   {
06     var orders =
07      from order in context.Orders
08
09       select order;
10     return orders.ToList().AsQueryable();
11   }
12 }
```

The application must meet the following requirements:
Return only orders that have an OrderDate value other than null.
Return only orders that were placed in the year specified in the OrderDate property or in a later year. You need to ensure that the application meets the requirements.
Which code segment should you insert at line 08?

A. Where order.OrderDate.Value != null && order.OrderDate.Value.Year > = year
B. Where order.OrderDate.Value = = null && order.OrderDate.Value.Year = = year
C. Where order.OrderDate.HasValue && order.OrderDate.Value.Year = = year
D. Where order.OrderDate.Value.Year = = year

Answer: A

Explanation: *For the requirement to use an OrderDate value other than null use: OrderDate.Value != null
*For the requirement to use an OrderDate value for this year or a later year use: OrderDate.Value>= year

NEW QUESTION 4
DRAG DROP
You are developing an application by using C#. The application includes an array of decimal values named loanAmounts. You are developing a LINQ query to return the values from the array.
The query must return decimal values that are evenly divisible by two. The values must be sorted from the lowest value to the highest value.
You need to ensure that the query correctly returns the decimal values.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Answer:

Explanation: Note: In a query expression, the orderby clause causes the returned sequence or subsequence (group) to be sorted in either ascending or descending order.
Examples:
// Query for ascending sort. IEnumerable<string> sortAscendingQuery = from fruit in fruits
orderby fruit //"ascending" is default select fruit;
// Query for descending sort. IEnumerable<string> sortDescendingQuery = from w in fruits
orderby w descending select w;

NEW QUESTION 5

You are developing an application. The application includes a method named ReadFile that reads data from a file.
The ReadFile() method must meet the following requirements: It must not make changes to the data file.
It must allow other processes to access the data file.
It must not throw an exception if the application attempts to open a data file that does not exist. You need to implement the ReadFile() method.
Which code segment should you use?

A. var fs = File.Open(Filename, FileMode.OpenOrCreate, FileAccess.Read, FileShare.ReadWrite);
B. var fs = File.Open(Filename, FileMode.Open, FileAccess.Read, FileShare.ReadWrite);
C. var fs = File.Open(Filename, FileMode.OpenOrCreate, FileAccess.Read, FileShare.Write);
D. var fs = File.ReadAllLines(Filename);
E. var fs = File.ReadAllBytes(Filename);

Answer: A

Explanation: FileMode.OpenOrCreate - Specifies that the operating system should open a file if it exists; otherwise, a new file should be created. If the file is opened with FileAccess.Read, FileIOPermissionAccess.Read permission is required. If the file access is FileAccess.Write, FileIOPermissionAccess.Write permission is required. If the file is opened with FileAccess.ReadWrite, both FileIOPermissionAccess.Read and FileIOPermissionAccess.Write permissions are required. http://msdn.microsoft.com/en-us/library/system.io.filemode.aspx
FileShare.ReadWrite - Allows subsequent opening of the file for reading or writing.If this flag is not specified, any request to open the file for reading or writing (by this process or another process) will fail until the file is closed.However, even if this flag is specified, additional permissions might still be needed to access the file. http://msdn.microsoft.com/pl-pl/library/system.io.fileshare.aspx

NEW QUESTION 6
DRAG DROP
An application serializes and deserializes XML from streams. The XML streams are in the following format:

```
<Name xmlns="http://www.contoso.com/2012/06">
  <LastName>Jones</LastName>
  <FirstName>David</FirstName>
</Name>
```

The application reads the XML streams by using a DataContractSerializer object that is declared by the following code segment:
var ser = new DataContractSerializer(typeof(Name));
You need to ensure that the application preserves the element ordering as provided in the XML stream.
How should you complete the relevant code? (To answer, drag the appropriate attributes to the correct locations in the answer area-Each attribute may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
[DataContract(Namespace="http://www.contoso.com/2012/06")]
[DataMember(Order=10)]
[DataMember]
[DataContract(Name="http://www.contoso.com/2012/06")]
[DataMember(Name="http://www.contoso.com/2012/06", Order=10)]
[DataContract]
[DataMember(Name="http://www.contoso.com/2012/06")]
```

```
class Name
{
  public string FirstName { get; set; }

  public string LastName { get; set; }
}
```

Answer:

Explanation: Target 1: The DataContractAttribute.Namespace Property gets or sets the namespace for the data contract for the type. Use this property to specify a particular namespace if your type must return data that complies with a specific data contract.
Target2, target3: We put Order=10 on FirstName to ensure that LastName is ordered first. Note:
The basic rules for data ordering include:
* If a data contract type is a part of an inheritance hierarchy, data members of its base types are always first in the order.
* Next in order are the current type's data members that do not have the Order property of the DataMemberAttribute attribute set, in alphabetical order.
* Next are any data members that have the Order property of the DataMemberAttribute attribute set. These are ordered by the value of the Order property first and then alphabetically if there is more than one member of a certain Order value. Order values may be skipped.
Reference: Data Member Order
https://msdn.microsoft.com/en-us/library/ms729813(v=vs.110).aspx Reference: DataContractAttribute.Namespace Property https://msdn.microsoft.com/enus/library/system.runtime.serialization.datacontractattribute.namespace(v=vs.110).aspx

NEW QUESTION 7
You are developing an application. The application converts a Location object to a string by using a method named WriteObject. The WriteObject() method accepts two parameters, a Location object and an XmlObjectSerializer object.
The application includes the following code. (Line numbers are included for reference only.)

```
01 public enum Compass
02 {
03    North,
04    South,
05    East,
06    West
07 }
08 [DataContract]
09 public class Location
10 {
11    [DataMember]
12    public string Label { get; set; }
13    [DataMember]
14    public Compass Direction { get; set; }
15 }
16 void DoWork()
17 {
18    var location = new Location { Label = "Test", Direction = Compass.West };
19    Console.WriteLine(WriteObject(location,
20
21    ));
22 }
```

You need to serialize the Location object as a JSON object. Which code segment should you insert at line 20?

A. New DataContractSerializer(typeof(Location))
B. New XmlSerializer(typeof(Location))
C. New NetDataContractSenalizer()
D. New DataContractJsonSerializer(typeof(Location))

Answer: D

Explanation: The code is using [DataContract] attribute here so need to use DataContractSerializer class.
The DataContractJsonSerializer class serializes objects to the JavaScript Object Notation (JSON) and deserializes JSON data to objects.
Use the DataContractJsonSerializer class to serialize instances of a type into a JSON document and to deserialize a JSON document into an instance of a type.

NEW QUESTION 8
DRAG DROP
You are developing a class named ExtensionMethods.
You need to ensure that the ExtensionMethods class implements the IsEmail() method on string objects.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
public static class ExtensionMethods

public class ExtensionMethods

this String str

String str

protected static class ExtensionMethods
```

```
{
    public static bool IsUrl(
        this String str)
    {
        var regex = new Regex(
            "(https?://)?([A-Za-z9-0-]*\\.)?([A-Za-z0-9-]*)" +
            "\\.[A-Za-z0-9]*/?.*");
        return regex.IsMatch(str);
    }
}
```

Answer:

Explanation: Extensions must be in a static class as it kind of a shared source of extension methods. You do not instantiate the class. The key word “this” is simply a syntax how you tell the compiler, that your method IsUrl is extension for the String object

NEW QUESTION 9
You are developing an application. The application includes classes named Employee and Person and an interface named IPerson.
The Employee class must meet the following requirements:
It must either inherit from the Person class or implement the IPerson interface. It must be inheritable by other classes in the application.
You need to ensure that the Employee class meets the requirements.
Which two code segments can you use to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

A.
```
sealed class Employee : Person
{
  ...
}
```

B.
```
abstract class Employee : Person
{
  ...
}
```

C.
```
sealed class Employee : IPerson
{
  ...
}
```

D.
```
abstract class Employee : IPerson
{
  ...
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: BD

Explanation: Sealed - When applied to a class, the sealed modifier prevents other classes from inheriting from it. Reference: http://msdn.microsoft.com/en-us/library/88c54tsw(v=vs.110).aspx

NEW QUESTION 10
You are developing an application that will convert data into multiple output formats.
The application includes the following code. (Line numbers are included for reference only.)

```
01 public class TabDelimitedFormatter : IOutputFormatter<string>
02 {
03   readonly Func<int, char> suffix = col => col % 2 == 0 ? '\n' : '\t';
04   public string GetOutput(IEnumerator<string> iterator, int recordSize)
05   {
06
07   }
08 }
```

You are developing a code segment that will produce tab-delimited output. All output routines implement the following interface:

```
public interface IOutputFormatter<T>
{
  string GetOutput(IEnumerator<T> iterator, int recordSize);
}
```

You need to minimize the completion time of the GetOutput() method. Which code segment should you insert at line 06?

A.
```
string output = null;
for (int i = 1; iterator.MoveNext(); i++)
{
  output = string.Concat(output, iterator.Current, suffix(i));
}
return output;
```

B.
```
var output = new StringBuilder();
for (int i = 1; iterator.MoveNext(); i++)
{
  output.Append(iterator.Current);
  output.Append(suffix(i));
}
return output.ToString();
```

C.
```
string output = null;
for (int i = 1; iterator.MoveNext(); i++)
{
  output = output + iterator.Current + suffix(i);
}
return output;
```

D.
```
string output = null;
for (int i = 1; iterator.MoveNext(); i++)
{
  output += iterator.Current + suffix(i);
}
return output;
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

Explanation: A String object concatenation operation always creates a new object from the existing string and the new data.
A StringBuilder object maintains a buffer to accommodate the concatenation of new data. New data is appended to the buffer if room is available; otherwise, a new, larger buffer is allocated, data from the original buffer is copied to the new buffer, and the new data is then appended to the new buffer. The performance of a concatenation operation for a String or StringBuilder object depends on the frequency of memory allocations. A String concatenation operation always allocates memory, whereas a StringBuilder concatenation operation allocates memory only if the StringBuilder object buffer is too small to accommodate the new data. Use the String class if you are concatenating a fixed number of String objects. In that case, the compiler may even combine individual concatenation operations into a single operation. Use a StringBuilder object if you are concatenating an arbitrary number of strings; for example, if you're using a loop to concatenate a random number of strings of user input.
http://msdn.microsoft.com/en-us/library/system.text.stringbuilder(v=vs.110).aspx

NEW QUESTION 10
You are developing an application by using C#.
The application includes an object that performs a long running process.
You need to ensure that the garbage collector does not release the object's resources until the process completes.
Which garbage collector method should you use?

A. ReRegisterForFinalize()
B. SuppressFinalize()
C. Collect()
D. WaitForFullGCApproach()

Answer: B

Explanation: You can use the SuppressFinalize method in a resource class to prevent a redundant garbage collection from being called.
Reference: GC.SuppressFinalize Method (Object)
https://msdn.microsoft.com/en-us/library/system.gc.suppressfinalize(v=vs.110).aspx

NEW QUESTION 14
You are creating a class named Employee. The class exposes a string property named EmployeeType. The following code segment defines the Employee class. (Line numbers are included for reference only.)

```
01 public class Employee
02 {
03    internal string EmployeeType
04    {
05       get;
06       set;
07    }
08 }
```

The EmployeeType property value must be accessed and modified only by code within the Employee class or within a class derived from the Employee class.
You need to ensure that the implementation of the EmployeeType property meets the requirements. Which two actions should you perform? (Each correct answer represents part of the complete solution. Choose two.)

A. Replace line 05 with the following code segment: protected get;
B. Replace line 06 with the following code segment: private set;
C. Replace line 03 with the following code segment: public string EmployeeType
D. Replace line 05 with the following code segment: private get;
E. Replace line 03 with the following code segment: protected string EmployeeType
F. Replace line 06 with the following code segment: protected set;

Answer: BE

Explanation: protected string EmpType { get; private set;}
This is a quite common way to work with properties within base classes. Incorrect:
Not D: Cannot be used because of the internal keyword on line 03.

NEW QUESTION 19
You are implementing a method named Calculate that performs conversions between value types and reference types. The following code segment implements the method. (Line numbers are included for reference only.)

```
01 public static void Calculate(float amount)
02 {
03    object amountRef = amount;
04
05    Console.WriteLine(balance);
06 }
```

You need to ensure that the application does not throw exceptions on invalid conversions. Which code segment should you insert at line 04?

A. int balance = (int) (float)amountRef;
B. int balance = (int)amountRef;
C. int balance = amountRef;
D. int balance = (int) (double) amountRef;

Answer: A

Explanation: Explicit cast of object into float, and then another Explicit cast of float into int. Reference: explicit (C# Reference)
https://msdn.microsoft.com/en-us/library/xhbhezf4.aspx

NEW QUESTION 20
You use the Task.Run() method to launch a long-running data processing operation. The data processing operation often fails in times of heavy network congestion.
If the data processing operation fails, a second operation must clean up any results of the first operation.
You need to ensure that the second operation is invoked only if the data processing operation throws an unhandled exception.
What should you do?

A. Create a TaskCompletionSource<T> object and call the TrySetException() method of the object.
B. Create a task by calling the Task.ContinueWith() method.
C. Examine the Task.Status property immediately after the call to the Task.Run() method.
D. Create a task inside the existing Task.Run() method by using the AttachedToParent optio

Answer: B

Explanation: Task.ContinueWith - Creates a continuation that executes asynchronously when the target Task completes.The returned Task will not be scheduled for execution until the current task has completed, whether it completes due to running to completion successfully, faulting due to an unhandled exception, or exiting out early due to being canceled.
http://msdn.microsoft.com/en-us/library/dd270696.aspx

NEW QUESTION 25
You are developing an application that includes a class named UserTracker. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public delegate void AddUserCallback(int i);
02 public class UserTracker
03 {
04    List<User> users = new List<User>();
05    public void AddUser(string name, AddUserCallback callback)
06    {
07       users.Add(new User(name));
08       callback(users.Count);
09    }
10 }
11
12 public class Runner
13 {
14
15    UserTracker tracker = new UserTracker();
16    public void Add(string name)
17    {
18
19    }
20 }
```

You need to add a user to the UserTracker instance. What should you do?

A. Insert the following code segment at line 14:

```
private static void PrintUserCount(int i)
{
   ...
}
```

Insert the following code segment at line 18:

```
AddUserCallback callback = PrintUserCount;
```

B. Insert the following code segment at line 11:

```
delegate void AddUserDelegate(UserTracker userTracker);
```

Insert the following code segment at line 18:

```
AddUserDelegate addDelegate = (userTracker) =>
  {
    ...
  };
addDelegate(tracker);
```

C. Insert the following code segment at line 11:

```
delegate void AddUserDelegate(string name, AddUserCallback callback);
```

Insert the following code segment at line 18:

```
AddUserDelegate adder = (i, callback) =>
  {
    ...
  };
```

D. Insert the following code segment at line 18:

```
tracker.AddUser(name, delegate(int i)
  {
    ...
  });
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

NEW QUESTION 28
DRAG DROP
You develop an application that displays information from log files when errors occur. The application will prompt the user to create an error report that sends details about the error and the session to
the administrator.
When a user opens a log file by using the application, the application throws an exception and closes. The application must preserve the original stack trace information when an exception occurs during this process.
You need to implement the method that reads the log files.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
using (StringReader sr = new StringReader("log.txt"))
using (StreamReader sr = new StreamReader("log.txt"))
throw new FileNotFoundException();
throw;
```

```
{
    try
    {
        string line;
        while ((line = sr.ReadLine()) != null)
        {
            Console.WriteLine(line);
        }
    }
    catch (FileNotFoundException e)
    {
        Console.Write(e.ToString());

    }
}
```

Answer:

Explanation: StreamReader - Implements a TextReader that reads characters from a byte stream in a particular encoding.
Reference: http://msdn.microsoft.com/en-us/library/system.io.streamreader(v=vs.110).aspx
Once an exception is thrown, part of the information it carries is the stack trace. The stack trace is a list of the method call hierarchy that starts with the method that throws the exception and ends with the method that catches the exception. If an exception is re-thrown by specifying the exception in the throw statement, the stack trace is restarted at the current method and the list of method calls between the original method that threw the exception and the current method is lost. To keep the original stack trace information with the exception, use the throw statement without specifying the exception.
Reference: http://msdn.microsoft.com/en-us/library/ms182363(v=vs.110).aspx Incorrect:
StringReader - Implements a TextReader that reads from a string.
Reference: http://msdn.microsoft.com/en-us/library/system.io.stringreader(v=vs.110).aspx

NEW QUESTION 32
DRAG DROP
You are developing an application that includes a class named Kiosk. The Kiosk class includes a static property named Catalog. The Kiosk class is defined by the following code segment. (Line numbers are included for reference only.)

```
01 public class Kiosk
02 {
03    static Catalog _catalog = null;
04    static object _lock = new object();
05    public static Catalog Catalog
06    {
07       get
08       {
09
10          return _catalog;
11       }
12    }
13 }
```

You have the following requirements:
Initialize the _catalog field to a Catalog instance. Initialize the _catalog field only once.
Ensure that the application code acquires a lock only when the _catalog object must be instantiated. You need to meet the requirements.
Which three code segments should you insert in sequence at line 09? (To answer, move the appropriate code segments from the list of code segments to the answer area and arrange them in the correct order.)

```
lock (_lock)
```

```
if (_catalog != null) _catalog = new Catalog
();
```

```
if (_catalog != null)
```

```
if (_catalog == null) _catalog = new Catalog
();
```

```
if (_catalog == null)
```

Answer:

Explanation: After taking a lock you must check once again the _catalog field to be sure that other threads didn't instantiated it in the meantime.

NEW QUESTION 35
You are developing a C# application that has a requirement to validate some string input data by using the Regex class.
The application includes a method named ContainsHyperlink. The ContainsHyperlink() method will verify the presence of a URI and surrounding markup.
The following code segment defines the ContainsHyperlink() method. (Line numbers are included for reference only.)

```
01 bool ContainsHyperlink(string inputData)
02 {
03    string regExPattern = "href\\s*=\\s*(?:\"(?<1>[^\"]*)\"|(?<1>\\S+))";
04
05    return evaluator.IsMatch(inputData);
06 }
```

The expression patterns used for each validation function are constant.
You need to ensure that the expression syntax is evaluated only once when the Regex object is initially instantiated.
Which code segment should you insert at line 04?

A.
```
var evaluator = new Regex(regExPattern, RegexOptions.CultureInvariant);
```

B.
```
var evaluator = new Regex(inputData);
```

C.
```
var assemblyName = "Validation";
var compilationInfo = new RegexCompilationInfo(inputData, RegexOptions.IgnoreCase, "Href", assemblyName,
true);
Regex.CompileToAssembly(new[] { compilationInfo }, new AssemblyName(assemblyName));
var evaluator = new Regex(regExPattern, RegexOptions.CultureInvariant);
```

D.
```
var evaluator = new Regex(regExPattern, RegexOptions.Compiled);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

Explanation: RegexOptions.Compiled - Specifies that the regular expression is compiled to an assembly.This yields faster execution but increases startup time.This value should not be assigned to the Options property when calling the CompileToAssembly method.
http://msdn.microsoft.com/en-us/library/system.text.regularexpressions.regexoptions.aspx Additional info
http://stackoverflow.com/questions/513412/how-does-regexoptions-compiled-work

NEW QUESTION 37
You are developing an application by using C#. You have the following requirements:
Support 32-bit and 64-bit system configurations.
Include pre-processor directives that are specific to the system configuration. Deploy an application version that includes both system configurations to testers.
Ensure that stack traces include accurate line numbers.
You need to configure the project to avoid changing individual configuration settings every time you deploy the application to testers.
Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Update the platform target and conditional compilation symbols for each application configuration.
B. Create two application configurations based on the default Release configuration.
C. Optimize the application through address rebasing in the 64-bit configuration.
D. Create two application configurations based on the default Debug configuratio

Answer: AD

Explanation: A: “include pre-processor directives that are specific to the system configuration” system configuration here refers to bitness ie 32-bit or 64-bit so the developer wants to use in code different pre-processor directives for 32/64 bit,
this is achieved by defining and using conditional compilation symbols for different platform targets (platform target is VS term for bitness ie for 32/64 bit).
D (not B): The question about testing, debugging, stack trace, line numbers etc. There is not a single word about release

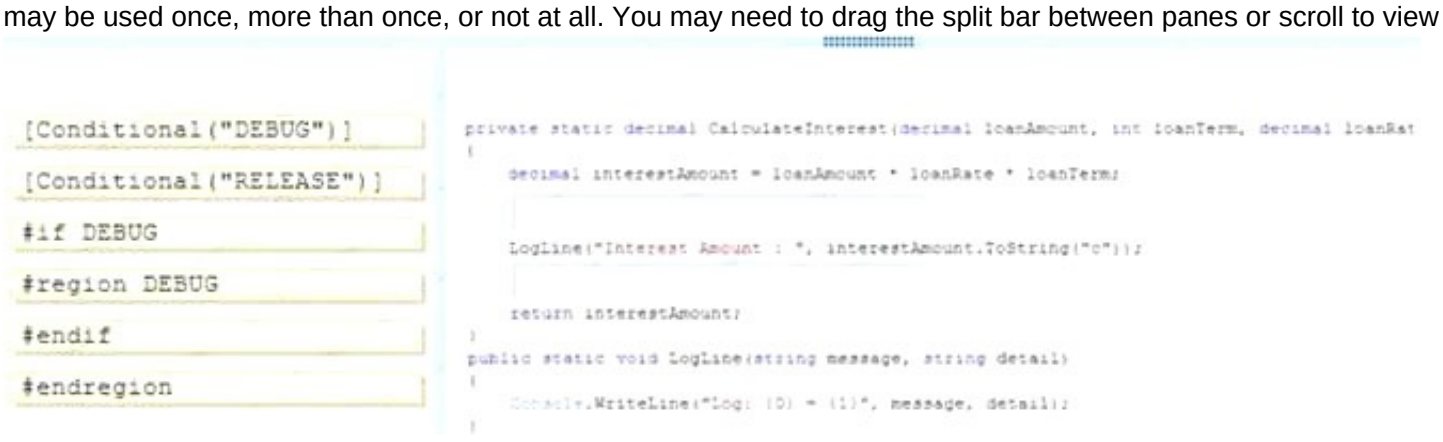
NEW QUESTION 38
You are developing an application that will transmit large amounts of data between a client computer and a server.
You need to ensure the validity of the data by using a cryptographic hashing algorithm. Which algorithm should you use?

A. HMACSHA256
B. RNGCryptoServiceProvider
C. DES
D. Aes

Answer: A

Explanation: The .NET Framework provides the following classes that implement hashing algorithms: HMACSHA1.
MACTripleDES. MD5CryptoServiceProvider. RIPEMD160.
SHA1Managed. SHA256Managed. SHA384Managed. SHA512Managed.
HMAC variants of all of the Secure Hash Algorithm (SHA), Message Digest 5 (MD5), and RIPEMD-160 algorithms.
CryptoServiceProvider implementations (managed code wrappers) of all the SHA algorithms. Cryptography Next Generation (CNG) implementations of all the MD5 and SHA algorithms. Reference: http://msdn.microsoft.com/en-us/library/92f9ye3s.aspx#hash_values

NEW QUESTION 40
DRAG DROP
You are testing an application. The application includes methods named CalculateInterest and LogLine. The CalculateInterest() method calculates loan interest.
The LogLine() method sends diagnostic messages to a console window.
You have the following requirements:
The CalculateInterest() method must run for all build configurations. The LogLine() method must be called only for debug builds.
You need to ensure that the methods run correctly.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)



Answer:

Explanation: When the C# compiler encounters an #if directive, followed eventually by an #endif directive, it will compile the code between the directives only if the specified symbol is defined. Unlike C and C++, you cannot assign a numeric value to a symbol; the #if statement in C# is Boolean and only tests whether the symbol has been defined or not. For example,
#define DEBUG
#if DEBUG
Console.WriteLine("Debug version");
#endif
Reference: http://stackoverflow.com/questions/2104099/c-sharp-if-then-directives-for-debug-vsrelease

NEW QUESTION 43
You are debugging an application that calculates loan interest. The application includes the following code. (Line numbers are included for reference only.)

```
01 private static decimal CalculateInterest(decimal loanAmount, int loanTerm, decimal loanRate)
02 {
03
04   decimal interestAmount = loanAmount * loanRate * loanTerm;
05
06   return interestAmount;
07 }
```

You need to ensure that the debugger breaks execution within the CalculateInterest() method when the loanAmount variable is less than or equal to zero in all builds of the application.
What should you do?

A. Insert the following code segment at line 03: Trace.Assert(loanAmount > 0);
B. Insert the following code segment at line 03: Debug.Assert(loanAmount > 0);
C. Insert the following code segment at line 05: Debug.Write(loanAmount > 0);
D. Insert the following code segment at line 05: Trace.Write(loanAmount > 0);

Answer: A

Explanation: By default, the Debug.Assert method works only in debug builds. Use the Trace.Assert method if you want to do assertions in release builds. For more information, see Assertions in Managed Code. http://msdn.microsoft.com/en-us/library/kssw4w7z.aspx
Incorrect:
Not B: Debug.Assert only works in debug mode. Here it must work in all builds of the application.

NEW QUESTION 44
You are developing an application that accepts the input of dates from the user.
Users enter the date in their local format. The date entered by the user is stored in a string variable named inputDate. The valid date value must be placed in a DateTime variable named validatedDate. You need to validate the entered date and convert it to Coordinated Universal Time (UTC). The code must not cause an exception to be thrown.
Which code segment should you use?

A.
```
bool validDate = DateTime.TryParse(inputDate,
 CultureInfo.CurrentCulture, DateTimeStyles.AdjustToUniversal | DateTimeStyles.AssumeLocal,
out validatedDate);
```

B.
```
bool validDate = DateTime.TryParse(inputDate,
 CultureInfo.CurrentCulture, DateTimeStyles.AssumeUniversal, out validatedDate);
```

C.
```
bool validDate = true;
try
{
  validatedDate = DateTime.Parse(inputDate);
}
catch
{
  validDate = false;
}
```

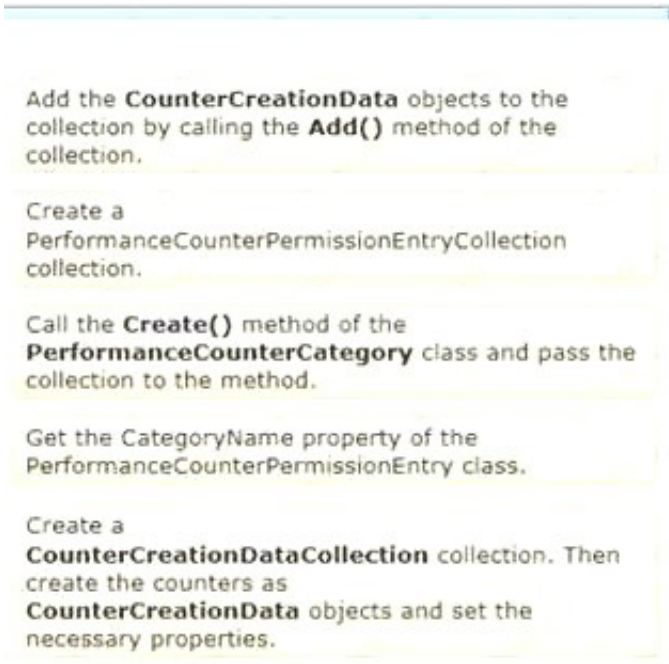
D.
```
validatedDate = DateTime.ParseExact(inputDate, "g",
 CultureInfo.CurrentCulture, DateTimeStyles.AdjustToUniversal | DateTimeStyles.AssumeUniversal);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

Explanation: AdjustToUniversal parses s and, if necessary, converts it to UTC.
Note: The DateTime.TryParse method converts the specified string representation of a date and time to its DateTime equivalent using the specified culture-specific format information and formatting style, and returns a value that indicates whether the conversion succeeded.

NEW QUESTION 46
DRAG DROP
You are developing an application by using C#. The application will process several objects per second.
You need to create a performance counter to analyze the object processing.
Which three actions should you perform in sequence? (To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.)



Answer:

Explanation: CounterCreationDataCollection counterDataCollection = new CounterCreationDataCollection(); // Box1
// Add the counter. Box 1
CounterCreationData averageCount64 = new CounterCreationData(); averageCount64.CounterType = PerformanceCounterType.AverageCount64;
averageCount64.CounterName = "AverageCounter64Sample"; counterDataCollection.Add(averageCount64);
// Add the base counter.
CounterCreationData averageCount64Base = new CounterCreationData(); averageCount64Base.CounterType = PerformanceCounterType.AverageBase;
averageCount64Base.CounterName = "AverageCounter64SampleBase"; counterDataCollection.Add(averageCount64Base); // Box 2
// Create the category. Box 3 PerformanceCounterCategory.Create("AverageCounter64SampleCategory", "Demonstrates usage of the AverageCounter64 performance counter type.", PerformanceCounterCategoryType.SingleInstance, counterDataCollection);

NEW QUESTION 51
You are developing an application by using C#. You provide a public key to the development team during development.
You need to specify that the assembly is not fully signed when it is built.
Which two assembly attributes should you include in the source code? (Each correct answer presents part of the solution. Choose two.)

A. AssemblyKeyNameAttribute
B. ObfuscateAssemblyAttribute
C. AssemblyDelaySignAttribute
D. AssemblyKeyFileAttribute

Answer: CD

Explanation: * AssemblyDelaySignAttribute
Specifies that the assembly is not fully signed when created.
* The following code example shows the use of the AssemblyDelaySignAttribute attribute with the AssemblyKeyFileAttribute.
using System;
using System.Refilection; [assembly:AssemblyKeyFileAttribute(“TestPublicKey.snk”)] [assembly:AssemblyDelaySignAttribute(true)]
namespace DelaySign
{
public class Test { }
}
Reference: http://msdn.microsoft.com/en-us/library/t07a3dye(v=vs.110).aspx

NEW QUESTION 56
DRAG DROP
You are developing an application that includes a class named Warehouse. The Warehouse class includes a static property named Inventory- The Warehouse class is defined by the following code segment. (Line numbers are included for reference only.)

```
01 public class Warehouse
02 {
03   static Inventory _inventory = null;
04   static object _lock = new object();
05   public static Inventory Inventory
06   {
07     get
08     {
09
10       return _inventory;
11     }
12   }
13 }
```

You have the following requirements:
Initialize the _inventory field to an Inventory instance. Initialize the _inventory field only once.

Ensure that the application code acquires a lock only when the _inventory object must be instantiated.
You need to meet the requirements.
Which three code segments should you insert in sequence at line 09? (To answer, move the appropriate code segments from the list of code segments to the answer area and arrange them in the correct order.)

```
if (_inventory != null) _inventory = new
Inventory();

if (_inventory != null)

lock (_lock)

if (_inventory == null)

if (_inventory == null) _inventory = new
Inventory();
```

Answer:

Explanation: After taking a lock you must check once again the _inventory field to be sure that other threads didn't instantiated it in the meantime.
First, you check if the inventory is null, if so, you lock it to avoid other threads to change it. Second, you check again for the null, as in the tiny millisecond between check for null and locking could another thread get it.
Finally you create the instance and release the lock.

NEW QUESTION 60
You are adding a public method named UpdateGrade to a public class named ReportCard. The code region that updates the grade field must meet the following requirements:
It must be accessed by only one thread at a time. It must not be vulnerable to a deadlock situation.
You need to implement the UpdateGrade() method. What should you do?

A. Add a private object named **lockObject** to the **ReportCard** class. Place the code region inside the following lock statement:

```
lock (lockObject)
{
  ...
}
```

B. Place the code region inside the following lock statement:

```
lock (this)
{
  ...
}
```

C. Add a public static object named **lockObject** to the **ReportCard** class. Place the code region inside the following lock statement:

```
lock (typeof(ReportCard))
{
  ...
}
```

D. Apply the following attribute to the **UpdateGrade()** method signature:

```
[MethodImpl(MethodImplOptions.Synchronized)]
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

Explanation: Because the class is public, you need a private lock Object. Incorrect:
Not B, not C: Once the ReportCard is public, other process can lock on type or instance. So, these options are leaning to a DEADLOCK.
Not D: [MethodImpl] attribute works locking on type (for static members) or on the instance(for instance members). It could cause a DEADLOCK.
Reference: https://msdn.microsoft.com/en-us/library/c5kehkcz.aspx

NEW QUESTION 61
You are creating a console application by using C#.
You need to access the assembly found in the file named car.dll. Which code segment should you use?

A. Assembly.Load();
B. Assembly.GetExecutingAssembly();
C. This.GetType();
D. Assembly.LoadFile("car.dll");

Answer: D

Explanation: Assembly.LoadFile - Loads the contents of an assembly file on the specified path. http://msdn.microsoft.com/en-us/library/b61s44e8.aspx

NEW QUESTION 64
You are developing an application by using C#.
The application includes an object that performs a long running process.
You need to ensure that the garbage collector does not release the object's resources until the process completes.
Which garbage collector method should you use?

A. WaitForFullGCComplete()
B. WaitForFullGCApproach()
C. KeepAlive()
D. WaitForPendingFinalizers()

Answer: C

Explanation: The GC.KeepAlive method references the specified object, which makes it ineligible for garbage collection from the start of the current routine to the point where this method is called.
The purpose of the KeepAlive method is to ensure the existence of a reference to an object that is at risk of being prematurely reclaimed by the garbage collector.
The KeepAlive method performs no operation and produces no side effects other than extending the lifetime of the object passed in as a parameter.
Reference: GC.KeepAlive Method (Object)
https://msdn.microsoft.com/en-us/library/system.gc.keepalive(v=vs.110).aspx

NEW QUESTION 65
DRAG DROP
You are developing an application by using C#. The application will output the text string "First Line" followed by the text string "Second Line".
You need to ensure that an empty line separates the text strings.
Which four code segments should you use in sequence? (To answer, move the appropriate code segments to the answer area and arrange them in the correct order.)

```
sb.Append("\l");
var sb = new StringBuilder();
sb.Append("First Line");
sb.Append("\t");
sb.AppendLine();
sb.Append(String.Empty);
sb.Append("Second Line");
```

Answer:

Explanation: Box 1:

```
var sb = new StringBuilder();
```

First we create the variable.
Box 2:

```
sb.Append("First Line");
```

We create the first text line.
Box 3:

```
sb.AppendLine();
```

We add a blank line.
The StringBuilder.AppendLine method appends the default line terminator to the end of the current StringBuilder object.
Box 4:

```
sb.Append("Second Line");
```

Finally we add the second line.

NEW QUESTION 68
You are developing an application by using C#. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public interface IDataContainer
02 {
03   string Data { get; set; }
04 }
05 void DoWork(object obj)
06 {
07
08   if (dataContainer != null)
09   {
10     Console.WriteLine(dataContainer.Data);
11   }
12 }
```

The DoWork() method must throw an InvalidCastException exception if the obj object is not of type IDataContainer when accessing the Data property.
You need to meet the requirements. Which code segment should you insert at line 07?

A. var dataContainer = (IDataContainer) obj;
B. var dataContainer = obj as IDataContainer;
C. var dataContainer = obj is IDataContainer;
D. dynamic dataContainer = obj;

Answer: A

Explanation: direct cast. If object is not of the given type, an InvalidCastException is thrown. Incorrect:
Not B: If obj is not of the given type, result is null. Not C: If obj is not of a given type, result is false.
Not D: This simply check the variable during runtime. It will not throw an exception. Reference: http://msdn.microsoft.com/en-us/library/ms173105.aspx

NEW QUESTION 73
An application receives JSON data in the following format:

```
{ "FirstName" : "David",
  "LastName" : "Jones",
  "Values" : [0, 1, 2] }
```

The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public class Name
02 {
03   public int[] Values { get; set; }
04   public string FirstName { get; set; }
05   public string LastName { get; set; }
06 }
07 public static Name ConvertToName(string json)
08 {
09   var ser = new JavaScriptSerializer();
10
11 }
```

You need to ensure that the ConvertToName() method returns the JSON input string as a Name object.
Which code segment should you insert at line 10?

A. Return ser.Desenalize (json, typeof(Name));
B. Return ser.ConvertToType<Name>(json);
C. Return ser.Deserialize<Name>(json);
D. Return ser.ConvertToType (json, typeof (Name));

Answer: C

Explanation: JavaScriptSerializer.Deserialize<T> - Converts the specified JSON string to an object of type T. http://msdn.microsoft.com/en-us/library/bb355316.aspx

NEW QUESTION 74
You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 class Customer
02 {
03   public string CompanyName { get; set; }
04   public string Id { get; set; }
05 }
06 const string sqlSelectCustomers = "SELECT CustomerID, CompanyName FROM Customers";
07 private static IEnumerable<Customer> GetCustomers(string sqlConnectionString)
08 {
09   List<Customer> customers = new List<Customer>();
10   SqlConnection sqlConnection = new SqlConnection(sqlConnectionString);
11   using (sqlConnection)
12   {
13     SqlCommand sqlCommand = new SqlCommand(sqlSelectCustomers, sqlConnection);
14
15     using (SqlDataReader sqlDataReader = sqlCommand.ExecuteReader())
16     {
17
18       {
19         Customer customer = new Customer();
20         customer.Id = (string)sqlDataReader["CustomerID"];
21         customer.CompanyName = (string)sqlDataReader["CompanyName"];
22         customers.Add(customer);
23       }
24     }
25   }
26   return customers;
27 }
```

The GetCustomers() method must meet the following requirements: Connect to a Microsoft SQL Server database.
Populate Customer objects with data from the database.
Return an IEnumerable<Customer> collection that contains the populated Customer objects. You need to meet the requirements.
Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Insert the following code segment at line 17: while (sqlDataReader.GetValues())
B. Insert the following code segment at line 14: sqlConnection.Open();
C. Insert the following code segment at line 14: sqlConnection.BeginTransaction();
D. Insert the following code segment at line 17: while (sqlDataReader.Read())
E. Insert the following code segment at line 17: while (sqlDataReader.NextResult())

Answer: BD

Explanation: B: SqlConnection.Open - Opens a database connection with the property settings specified by the ConnectionString.
Reference: http://msdn.microsoft.com/en-us/library/system.data.sqlclient.sqlconnection.open.aspx D: SqlDataReader.Read - Advances the SqlDataReader to the next record.
Reference: http://msdn.microsoft.com/en-us/library/system.data.sqlclient.sqldatareader.read.aspx Not E: reader.NextResult is wrong because that is used when reader has more than one result set (SP or inline SQL has more than one Select).

NEW QUESTION 77
You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 using System;
02 class MainClass
03 {
04   public static void Main(string[] args)
05   {
06     bool bValidInteger = false;
07     int value = 0;
08     do
09     {
10       Console.WriteLine("Enter an integer:");
11       bValidInteger = GetValidInteger(ref value);
12     } while (!bValidInteger);
13     Console.WriteLine("You entered a valid integer, " + value);
14   }
15   public static bool GetValidInteger(ref int val)
16   {
17     string sLine = Console.ReadLine();
18     int number;
19
20     {
21       return false;
22     }
23     else
24     {
25       val = number;
26       return true;
27     }
28   }
29 }
```

You need to ensure that the application accepts only integer input and prompts the user each time non-integer input is entered.
Which code segment should you add at line 19?

A. If (!int.TryParse(sLine, out number))
B. If ((number = Int32.Parse(sLine)) == Single.NaN)
C. If ((number = int.Parse(sLine)) > Int32.MaxValue)
D. If (Int32.TryParse(sLine, out number))

Answer: A

Explanation:
Incorrect:
Not B, not C: These will throw exception when user enters non-integer value. Not D: This is exactly the opposite what we want to achieve.
Int32.TryParse - Converts the string representation of a number to its 32-bit signed integer equivalent. A return value indicates whether the conversion succeeded.
http://msdn.microsoft.com/en-us/library/f02979c7.aspx

NEW QUESTION 80
You are debugging an application that calculates loan interest. The application includes the following code. (Line numbers are included for reference only.)

```
01 private static decimal CalculateInterest(decimal loanAmount, int loanTerm, decimal loanRate)
02 {
03
04   decimal interestAmount = loanAmount * loanRate * loanTerm;
05
06   return interestAmount;
07 }
```

You have the following requirements:
The debugger must break execution within the CalculateInterest() method when the loanAmount variable is less than or equal to zero.
The release version of the code must not be impacted by any changes. You need to meet the requirements.
What should you do?

A. Insert the following code segment at tine 05: Debug.Write(loanAmount > 0);
B. Insert the following code segment at line 05: Trace.Write(loanAmount > 0);
C. Insert the following code segment at line 03: Debug.Assert(loanAmount > 0);
D. Insert the following code segment at line 03: Trace.Assert(loanAmount > 0);

Answer: C

Explanation: By default, the Debug.Assert method works only in debug builds. Use the Trace.Assert method if you want to do assertions in release builds. For more information, see Assertions in Managed Code. http://msdn.microsoft.com/en-us/library/kssw4w7z.aspx

NEW QUESTION 81
You are developing an application that will process orders. The debug and release versions of the application will display different logo images.
You need to ensure that the correct image path is set based on the build configuration. Which code segment should you use?

A.
```
#if (DEBUG)
  imgPath = "TempFolder/Images/";
#elif (RELEASE)
  imgPath = "DevFolder/Images/";
#endif
```

B.
```
if (DEBUG)
  imgPath = "TempFolder/Images/";
else
  imgPath = "DevFolder/Images/";
endif
```

C.
```
#if (DEBUG)
  imgPath = "TempFolder/Images/";
#else
  imgPath = "DevFolder/Images/";
#endif
```

D.
```
if(Debugger.IsAttached)
{
  imgPath = "TempFolder/Images/";
}
else
{
  imgPath = "DevFolder/Images/";
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Explanation: There is no such constraint (unless you define one explicitly) RELEASE. http://stackoverflow.com/questions/507704/will-if-release-work-like-if-debug-does-in-c

NEW QUESTION 86
You are testing an application. The application includes methods named CalculateInterest and LogLine. The CalculateInterest() method calculates loan interest.
The LogLine() method sends diagnostic messages to a console window.
The following code implements the methods. (Line numbers are included for reference only.)

```
01
02  private static decimal CalculateInterest(decimal loanAmount, int loanTerm, decimal loanRate)
03  {
04    decimal interestAmount = loanAmount * loanRate * loanTerm;
05
06    LogLine("Interest Amount : ", interestAmount.ToString("c"));
07
08    return interestAmount;
09  }
10
11  public static void LogLine(string message, string detail)
12  {
13    Console.WriteLine("Log: {0} = {1}", message, detail);
14  }
```

You have the following requirements:
The CalculateInterest() method must run for all build configurations. The LogLine() method must run only for debug builds.
You need to ensure that the methods run correctly.
What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

A. Insert the following code segment at line 01:#region DEBUGInsert the following code segment at line 10:#endregion
B. Insert the following code segment at line 10: [Conditional("DEBUG")]
C. Insert the following code segment at line 05:#region DEBUGInsert the following code segment at line 07:#endregion
D. Insert the following code segment at line 01:#if DE30GInsert the following code segment at line 10:#endif

E. Insert the following code segment at line 01: [Conditional(MDEBUG")]
F. Insert the following code segment at line 05:#if DEBUGInsert the following code segment at line 07:#endif
G. Insert the following code segment at line 10: [Conditional("RELEASE")]

Answer: BF

Explanation: #if DEBUG: The code in here won't even reach the IL on release.
[Conditional("DEBUG")]: This code will reach the IL, however the calls to the method will not execute unless DEBUG is on.
http://stackoverflow.com/questions/3788605/if-debug-vs-conditionaldebug

NEW QUESTION 87
You are developing a method named CreateCounters that will create performance counters for an application. The method includes the following code. (Line numbers are included for reference only.)

```
01 void CreateCounters()
02 {
03   if (!PerformanceCounterCategory.Exists("Contoso"))
04   {
05     var counters = new CounterCreationDataCollection();
06     var ccdCounter1 = new CounterCreationData
07     {
08       CounterName = "Counter1",
09       CounterType = PerformanceCounterType.AverageTimer32
11     };
12     counters.Add(ccdCounter1);
13     var ccdCounter2 = new CounterCreationData
14     {
15       CounterName = "Counter2",
16
17     };
18     counters.Add(ccdCounter2);
19     PerformanceCounterCategory.Create("Contoso", "Help string",
20      PerformanceCounterCategoryType.MultiInstance, counters);
21   }
22 }
```

You need to ensure that Counter2 is available for use in Windows Performance Monitor (PerfMon). Which code segment should you insert at line 16?

A. CounterType = PerformanceCounterType.RawBase
B. CounterType = PerformanceCounterType.AverageBase
C. CounterType = PerformanceCounterType.SampleBase
D. CounterType = PerformanceCounterType.CounterMultiBase

Answer: B

Explanation: Note AverageTimer32 on line 09. The Base counter type AverageBase has the Parent (composite) counter types AverageTimer32, AverageCount64.
Reference:
http://msdn.microsoft.com/en-us/library/system.diagnostics.performancecountertype.aspx

NEW QUESTION 89
You are developing an application by using C#.
The application includes an object that performs a long running process.
You need to ensure that the garbage collector does not release the object's resources until the process completes.
Which garbage collector method should you use?

A. WaitForFullGCComplete()
B. SuppressFinalize()
C. WaitForFullGCApproach()
D. WaitForPendingFinalizers()

Answer: B

Explanation: You can use the SuppressFinalize method in a resource class to prevent a redundant garbage collection from being called.
Reference: GC.SuppressFinalize Method (Object)
https://msdn.microsoft.com/en-us/library/system.gc.suppressfinalize(v=vs.110).aspx

NEW QUESTION 94
DRAG DROP
You are developing an application that implements a set of custom exception types. You declare the custom exception types by using the following code segments:

```
public class ContosoException : System.Exception { ... }
public class ContosoDbException : ContosoException { ... }
public class ContosoValidationException : ContosoException { ... }
```

The application includes a function named DoWork that throws .NET Framework exceptions and custom exceptions. The application contains only the following logging methods:

```
static void Log(Exception ex) { ... }
static void Log(ContosoException ex) { ... }
static void Log(ContosoValidationException ex) { ... }
```

The application must meet the following requirements:
When ContosoValidationException exceptions are caught, log the information by using the static void Log (ContosoValidationException ex) method.
When ContosoDbException or other ContosoException exceptions are caught, log the information by using the static void Log(ContosoException ex) method.
You need to meet the requirements.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
(ContosoValidationException ex)
(ContosoException ex)
(Exception ex)
(ContosoDbException ex)
```

```
try
{
  DoWork();
}
catch
{
  Log(ex);
}
catch
{
  Log(ex);
}
catch
{
  Log(ex);
}
```

Answer:

Explanation: Catch the most specific exception first.

NEW QUESTION 97
You are developing an application that uses structured exception handling. The application includes a class named Logger. The Logger class implements a method named Log by using the following code segment:
public static void Log(Exception ex) { } You have the following requirements:
Log all exceptions by using the Log() method of the Logger class. Rethrow the original exception, including the entire exception stack. You need to meet the requirements. Which code segment should you use?

A.
```
catch
{
  var ex = new Exception();
  throw ex;
}
```

B.
```
catch (Exception ex)
{
  Logger.Log(ex);
  throw ex;
}
```

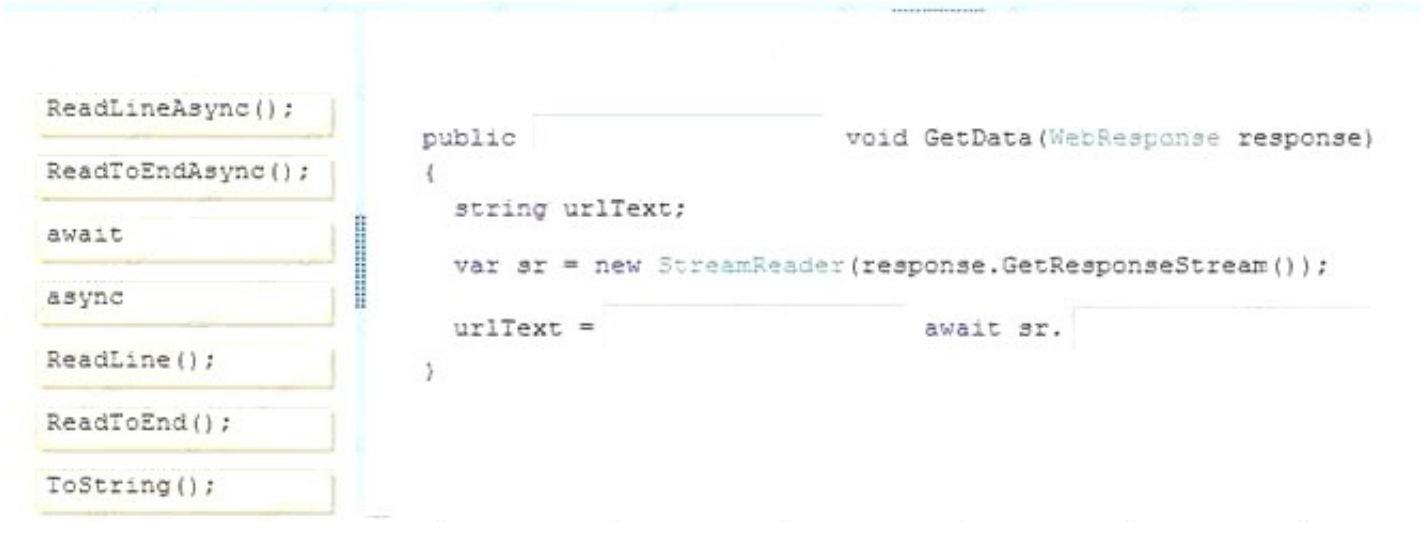
C.
```
catch
{
  Logger.Log(new Exception());
  throw;
}
```

D.
```
catch (Exception ex)
{
  Logger.Log(ex);
  throw;
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

NEW QUESTION 99
DRAG DROP
You are developing an application that will include a method named GetData. The GetData() method will retrieve several lines of data from a web service by using a System.IO.StreamReader object. You have the following requirements:
The GetData() method must return a string value that contains the entire response from the web service.
The application must remain responsive while the GetData() method runs. You need to implement the GetData() method.
How should you complete the relevant code? (To answer, drag the appropriate objects to the correct locations in the answer area. Each object may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)



Answer:

Explanation: Box 1. async
Box 2. await
Box 3. ReadLineAsync(); Incorrect:
Not Box 3: ReadToEndAsync() is not correct since only the first line of the response is required.

NEW QUESTION 100
You are developing an application that includes a class named BookTracker for tracking library books. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public delegate void AddBookCallback(int i);
02 public class BookTracker
03 {
04   List<Book> books = new List<Book>();
05   public void AddBook(string name, AddBookCallback callback)
06   {
07     books.Add(new Book(name));
08     callback(books.Count);
09   }
10 }
11
12 public class Book
13 {
14
15   BookTracker tracker = new BookTracker();
16   public void Add(string name)
17   {
18
19   }
20 }
```

You need to add a book to the BookTracker instance. What should you do?

A. Insert the following code segment at line 18:

```
tracker.AddBook(name, delegate(int i)
  {
    ...
  });
```

B. Insert the following code segment at line 11:

```
delegatevoidAddBookDelegate(stringname, AddBookCallback callback);
```

Insert the following code segment at line 18:

```
AddBookDelegateadder = (i, callback) =>
  {
    ...
  };
```

C. Insert the following code segment at line 11:

```
delegatevoidAddBookDelegate(BookTracker bookTracker);
```

Insert the following code segment at line 18:

```
AddBookDelegateaddDelegate = (bookTracker) =>
  {
    ...
  };
addDelegate(tracker);
```

D. Insert the following code segment at line 14:

```
private static void PrintBookCount(int i)
{
  ...
}
```

Insert the following code segment at line 18:

```
AddBookCallback callback = PrintBookCount;
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

NEW QUESTION 103
You are developing an application by using C#. You provide a public key to the development team during development.
You need to specify that the assembly is not fully signed when it is built.
Which two assembly attributes should you include in the source code? (Each correct answer presents part of the solution. Choose two.)

A. AssemblyFlagsAttribute
B. AssemblyKeyFileAttribute
C. AssemblyConfigurationAttribute
D. AssemblyDelaySignAttribute

Answer: BD

Explanation: * AssemblyDelaySignAttribute
Specifies that the assembly is not fully signed when created.
* The following code example shows the use of the AssemblyDelaySignAttribute attribute with the AssemblyKeyFileAttribute.
using System;
using System.Refilection; [assembly:AssemblyKeyFileAttribute(“TestPublicKey.snk”)] [assembly:AssemblyDelaySignAttribute(true)]
namespace DelaySign
{
public class Test { }
}
Reference: http://msdn.microsoft.com/en-us/library/t07a3dye(v=vs.110).aspx

NEW QUESTION 108

You are creating a class named Employee. The class exposes a string property named EmployeeType. The following code segment defines the Employee class. (Line numbers are included for reference only.)

```
01 public class Employee
02 {
03   internal string EmployeeType
04   {
05     get;
06     set;
07   }
08 }
```

The EmployeeType property value must meet the following requirements:
The value must be accessed only by code within the Employee class or within a class derived from the Employee class.
The value must be modified only by code within the Employee class.
You need to ensure that the implementation of the EmployeeType property meets the requirements. Which two actions should you perform? (Each correct answer represents part of the complete solution. Choose two.)

A. Replace line 03 with the following code segment: public string EmployeeType
B. Replace line 06 with the following code segment: protected set;
C. Replace line 05 with the following code segment: private get;
D. Replace line 05 with the following code segment: protected get;
E. Replace line 03 with the following code segment: protected string EmployeeType
F. Replace line 06 with the following code segment: private set;

Answer: EF

Explanation: Incorrect:
Not D: Cannot be used because of the internal keyword on line 03.

NEW QUESTION 111
You are developing a C# application that includes a class named Product. The following code segment defines the Product class:

```
public class Product
{
  public int Id { get; set; }
  public int CategoryId { get; set; }
  public string Name { get; set; }
  public bool IsValid { get; set; }
}
```

You implement System.ComponentModel.DataAnnotations.IValidateableObject interface to provide a way to validate the Product object.
The Product object has the following requirements: The Id property must have a value greater than zero.
The Name property must have a value other than empty or null.
You need to validate the Product object. Which code segment should you use?

A
```
public bool Validate()
{
  IsValid = Id > 0 || !string.IsNullOrEmpty(Name);
  return IsValid;
}
```

B
```
public IEnumerable<ValidationResult> Validate(ValidationContext validationContext)
{
  if (Id <= 0)
    yield return new ValidationResult("Product Id is required.", new[] { "Id" });
  if (string.IsNullOrEmpty(Name))
    yield return new ValidationResult("Product Name is required.", new[] { "Name" });
}
```

C
```
public bool Equals(Product productToValidate)
{
  productToValidate.IsValid = productToValidate.Id > 0 || !string.IsNullOrEmpty(productToValidate.Name);
  return productToValidate.IsValid;
}
```

D
```
public ValidationResult Validate()
{
  ValidationResult validationResult = null;
  if (Id <= 0)
  {
    validationResult = new ValidationResult("Product Id is required.");
  }
  if (string.IsNullOrEmpty(Name))
  {
    validationResult = new ValidationResult("Product Name is required.");
  }
  return validationResult;
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

NEW QUESTION 112
DRAG DROP
You have the following class:

```
public class Class1 : IEquatable<Class1>
{
  public Int32 ID { get; set; }
  public String Name { get; set; }
  public bool Equals(Class1 other)
  {
  }
}
```

You need to implement IEquatable. The Equals method must return true if both ID and Name are set to the identical values. Otherwise, the method must return false. Equals must not throw an exception.
What should you do? (Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.)

```
if (!Object.Equals
(this.Name, other.Name)) return false;
```

```
if (this.ID == other.ID) return false;
```

```
return false;
```

```
return true;
```

```
if (other == null) return false;
```

```
break
```

```
if (this.ID != other.ID) return false;
```

```
if (!this.Name.Equals
(other.Name)) return false;
```

Answer:

Explanation: In Box 3 we must use Name.Equals, not Object.Equals, to properly compare two strings. Incorrect:
Not Box 3: Object.Equals (obj, obj) compares the REFERENCE (true if they point to same object). Two strings, even having the same value will never have the same reference. So it is not applicable here.

NEW QUESTION 116
HOTSPOT
You have the following code:

```
[DataContract(Name="Indvidual")]
  public class Individual
  {
    private string m_FirstName;
    private string m_LastName;

    [DataMember]
    public string FirstName
    {
      get { return m_FirstName; }
      set { m_FirstName = value; }
    }

    [DataMember(EmitDefaultValue=false)]
    public string LastName
    {
      get { return m_LastName; }
      set { m_LastName = value; }
    }


    public Individual()
    {
    }

   public Individual(string firstName, string lastName)
   {
     m_FirstName = firstName;
     m_LastName = lastName;
   }

}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

	Yes	No
LastName will be serialized after firstName.	○	○
The namespace used in the serialized XML will be Individual.	○	○
The lastName node will always appear in the serialized XML.	○	○

	Yes	No
LastName will be serialized after firstName.	●	○
The namespace used in the serialized XML will be Individual.	○	●
The lastName node will always appear in the serialized XML.	○	●

Answer:

Explanation: Note:
* The System.Runtime.Serialization namespace contains classes that can be used for serializing and deserializing objects. Serialization is the process of converting an object or a graph of objects into a linear sequence of bytes for either storage or transmission to another location. Deserialization is the process of taking in stored information and recreating objects from it.
* EmitDefaultValue DataMemberAttribute.EmitDefaultValue Property
Gets or sets a value that specifies whether to serialize the default value for a field or property being serialized.
true if the default value for a member should be generated in the serialization stream; otherwise, false.

NEW QUESTION 118
HOTSPOT
You are developing an application in C#.
The application will display the temperature and the time at which the temperature was recorded. You have the following method (line numbers are included for reference only):

```
01 public void DisplayTemperature(DateTime date, double temp)
02 {
03   string output;
04
05   string lblMessage = output;
06 }
```

You need to ensure that the message displayed in the lblMessage object shows the time formatted according to the following requirements:
The time must be formatted as hour:minute AM/PM, for example 2:00 PM. The date must be formatted as month/day/year, for example 04/21/2013.

The temperature must be formatted to have two decimal places, for example 23-45.
Which code should you insert at line 04? (To answer, select the appropriate options in the answer area.)

```
output = string.Format("Temperature at [ ▼ ] on [ ▼ ]", date, temp) [ ▼ ]
```

{0:t}	{0:d}	{0}
{1:t}	{1:d}	{1}
{0:hh:mm}	{0:dd/mm/yy}	{0:N2}
{1:hh:mm}	{1:mm/dd/yy}	{1:N2}

Answer:

Explanation: {0:t}
{0:d}
{1:N2}

NEW QUESTION 122
HOTSPOT
You are developing an application that includes a Windows Communication Foundation (WCF) service. The service includes a custom TraceSource object named ts and a method named DoWork. The application must meet the following requirements:
Collect trace information when the DoWork() method executes.
Group all traces for a single execution of the DoWork() method as an activity that can be viewed in the WCF Service Trace Viewer Tool.
You need to ensure that the application meets the requirements.
How should you complete the relevant code? (To answer, select the correct code segment from each drop-down list in the answer area.)

```
static TraceSource ts = new TraceSource("Contoso",
    [ ▼ ]
  );
public void DoWork()
{
  var originalId = Trace.CorrelationManager.ActivityId;
  try
  {
    var guid = Guid.NewGuid();
    [ ▼ ]
    Trace.CorrelationManager.ActivityId = guid;
    [ ▼ ]
  }
  finally
  {
    [ ▼ ]
    [ ▼ ]
    Trace.CorrelationManager.ActivityId = originalId;
  }
}
```

```
static TraceSource ts = new TraceSource("Contoso",
```

[SourceLevels.ActivityTracing | SourceLevels.Information | SourceLevels.Verbose | SourceLevels.Critical]

```
  );
public void DoWork()
{
  var originalId = Trace.CorrelationManager.ActivityId;
  try
  {
    var guid = Guid.NewGuid();
```

[ts.TraceTransfer(1, "Changing Activity", guid); | ts.TraceEvent(TraceEventType.Start, 0, "Start"); | ts.TraceTransfer(1, "Changing Activity", originalGuid); | ts.TraceInformation("Start");]

```
    Trace.CorrelationManager.ActivityId = guid;
```

[ts.TraceTransfer(1, "Changing Activity", guid); | ts.TraceEvent(TraceEventType.Start, 0, "Start"); | ts.TraceTransfer(1, "Changing Activity", originalId); | ts.TraceInformation("Start");]

```
  }
  finally
  {
```

[ts.TraceTransfer(1, "Changing Activity", guid); | ts.TraceTransfer(1, "Changing Activity", originalId); | ts.TraceInformation("Stop");]

[ts.TraceTransfer(1, "Changing Activity", guid); | ts.TraceEvent(TraceEventType.Stop, 0, "Stop"); | ts.TraceInformation("Stop");]

```
    Trace.CorrelationManager.ActivityId = originalId;
  }
}
```

Answer:

Explanation: Activities are logical unit of processing. You can create one activity for each major processing unit in which you want traces to be grouped together. For example, you can create one activity for each request to the service. To do so, perform the following steps.
Save the activity ID in scope.
Create a new activity ID.
Transfer from the activity in scope to the new one, set the new activity in scope and emit a start trace for that activity.
The following code demonstrates how to do this. Guid oldID = Trace.CorrelationManager.ActivityId; Guid traceID = Guid.NewGuid(); ts.TraceTransfer(0, "transfer", traceID);
Trace.CorrelationManager.ActivityId = traceID; // Trace is static ts.TraceEvent(TraceEventType.Start, 0, "Add request"); Reference: Emitting User-Code Traces
https://msdn.microsoft.com/en-us/library/aa738759(v=vs.110).aspx

NEW QUESTION 123
DRAG DROP
You are developing a class named Temperature.
You need to ensure that collections of Temperature objects are sortable.
How should you complete the relevant code segment? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
public class Temperature : IComparable
public class Temperature : IComparer
CompareTo
Equals
this.Fahrenheit.CompareTo(otherTemperature.Fahrenheit);
otherTemperature.Fahrenheit.CompareTo(this.Fahrenheit);
```

```
{
    public double Fahrenheit { get; set; }
    public int
        (object obj)
    {
        if (obj == null) return 1;
        var otherTemperature = obj as Temperature;
        if(otherTemperature != null)
            return
        throw new ArgumentException("Object is not a Temperature");
    }
}
```

Answer:

Explanation:

```
public class Temperature : IComparable
{
    public double Fahrenheit { get; set; }
    public int CompareTo
        (object obj)
    {
        if (obj == null) return 1;
        var otherTemperature = obj as Temperature;
        if(otherTemperature != null)
            return this.Fahrenheit.CompareTo(otherTemperature.Fahrenheit);
        throw new ArgumentException("Object is not a Temperature");
    }
}
```

NEW QUESTION 126
DRAG DROP
You are creating a class named Data that includes a dictionary object named _data.
You need to allow the garbage collection process to collect the references of the _data object.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
staticDicticnary<int, WeakReference> _data;
staticDicticnary<int, Int32> _data;
_data.Add(i, new WeakReference(new Class(i * 2), false));
_data.Add(i, (Int32)(i * 2));
```

```
public class Data
{
  public Data(int count)
  {
    for (int i = 0; i < count; i++)
    {
    }
  }
}
```

Answer:

Explanation:

```
public class Data
{
  staticDictionary<int, WeakReference> _data;
  public Data(int count)
  {
    for (int i = 0; i < count; i++)
    {
      _data.Add(i, new WeakReference(new Class(i * 2), false));
    }
  }
}
```

NEW QUESTION 131
You have the following code:

```
List<Int32> items = new List<int>() {
  100,
  95,
  80,
  75,
  95
};
```

You need to retrieve all of the numbers from the items variable that are greater than 80. Which code should you use?

A.
```
var result = from i in items
  where i > 80
  select i;
```

B.
```
var result = items.Take(80);
```

C.
```
var result = items.First(i => i > 80);
```

D.
```
var result = items.Any(i => i > 80);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

NEW QUESTION 132
You are implementing a method named ProcessReports that performs a long-running task. The ProcessReports() method has the following method signature:
public void ProcessReports(List<decimal> values,CancellationTokenSource cts, CancellationToken ct) If the calling code requests cancellation, the method must perform the following actions:
Cancel the long-running task.
Set the task status to TaskStatus.Canceled.
You need to ensure that the ProcessReports() method performs the required actions. Which code segment should you use in the method body?

A. if (ct.IsCancellationRequested) return;
B. ct.ThrowIfCancellationRequested() ;
C. cts.Cancel();
D. throw new AggregateException();

Answer: B

Explanation: The CancellationToken.ThrowIfCancellationRequested method throws a OperationCanceledException if this token has had cancellation requested.
This method provides functionality equivalent to: C#
if (token.IsCancellationRequested)
throw new OperationCanceledException(token);
Reference: CancellationToken.ThrowIfCancellationRequested Method () https://msdn.microsoft.com/enus/library/system.threading.cancellationtoken.throwifcancellationrequested(v=vs.110).aspx

NEW QUESTION 133
You are developing an application that will be deployed to multiple computers. You set the assembly name.
You need to create a unique identity for the application assembly.
Which two assembly identity attributes should you include in the source code? (Each correct answer presents part of the solution. Choose two.)

A. AssemblyTitleAttribute

B. AssemblyCultureAttribute
C. AssemblyVersionAttribute
D. AssemblyKeyNameAttribute
E. AssemblyFileVersion

Answer: BC

Explanation: The AssemblyName object contains information about an assembly, which you can use to bind to that assembly. An assembly's identity consists of the following:
Simple name Version number
Cryptographic key pair Supported culture
B: AssemblyCultureAttribute
Specifies which culture the assembly supports.
The attribute is used by compilers to distinguish between a main assembly and a satellite assembly. A main assembly contains code and the neutral culture's resources. A satellite assembly contains
only resources for a particular culture, as in [assembly:AssemblyCultureAttribute("de")] C: AssemblyVersionAttribute
Specifies the version of the assembly being attributed.
The assembly version number is part of an assembly's identity and plays a key part in binding to the assembly and in version policy.

NEW QUESTION 136
An application uses X509 certificates for data encryption and decryption. The application stores certificates in the Personal certificates collection of the Current User store. On each computer, each certificate subject is unique.
The application includes a method named LoadCertificate. The LoadCertificate() method includes the following code. (Line numbers are included for reference only.)

```
01 X509Certificate2 LoadCertificate(string searchValue)
02 {
03   var store = new X509Store(StoreName.My, StoreLocation.CurrentUser);
04   store.Open(OpenFlags.ReadOnly | OpenFlags.OpenExistingOnly);
05   var certs = store.Certificates.Find(
06
07    searchValue, false);
08     ...
09 }
```

The LoadCertificate() method must load only certificates for which the subject exactly matches the searchValue parameter value.
You need to ensure that the LoadCertificate() method loads the correct certificates. Which code segment should you insert at line 06?

A.
```
X509FindType.FindBySubjectName,
```

B.
```
X509FindType.FindBySubjectKeyIdentifier,
```

C.
```
X509FindType.FindByIssuerName,
```

D.
```
X509FindType.FindBySubjectDistinguishedName,
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

Explanation: X509FindType.FindBySubjectDistiguishedName is a more specific search than that provided by the FindBySubjectName enumeration value. Using the FindBySubjectDistinguishedName value, the Find method performs a case-insensitive string comparison for the entire distinguished name. Searching by subject name is a less precise search.
Reference: X509FindType Enumeration https://msdn.microsoft.com/enus/
library/system.security.cryptography.x509certificates.x509findtype(v=vs.110).aspx

NEW QUESTION 138
You are developing an application that will parse a large amount of text.
You need to parse the text into separate lines and minimize memory use while processing data. Which object type should you use?

A. DataContractSerializer
B. StringBuilder
C. StringReader
D. JsonSerializer

Answer: C

Explanation: There are many ways to separate a string into lines. With StringReader, we read lines from a string individually in the order they appear. This type enables us to access string data through a streamoriented interface.
Reference: http://www.dotnetperls.com/stringreader

NEW QUESTION 142
You are modifying an existing application that manages employee payroll. The application includes a class named PayrollProcessor. The PayrollProcessor class connects to a payroll database and processes batches of paychecks once a week.
You need to ensure that the PayrollProcessor class supports iteration and releases database connections after the batch processing completes.
Which two interfaces should you implement? (Each correct answer presents part of the complete solution. Choose two.)

A. IEquatable
B. IEnumerable
C. IDisposable
D. IComparable

Answer: BC

Explanation: B: IEnumerable to implement iteration.
Exposes an enumerator, which supports a simple iteration over a non-generic collection. C: IDisposable Interface to implement disposing connections.
Defines a method to release allocated resources.
The primary use of this interface is to release unmanaged resources.

NEW QUESTION 146
You are developing an application that will read data from a text file and display the file contents. You need to read data from the file, display it, and correctly release the file resources.
Which code segment should you use?

A.
```
string inputLine;
using (StreamReader reader = new StreamReader("data.txt"))
{
  while ((inputLine = reader.ReadLine()) != null)
  {
    Console.WriteLine(inputLine);
  }
}
```

B.
```
string inputLine;
StreamReader reader = null;
using (reader = new StreamReader("data.txt")) ;
while ((inputLine = reader.ReadLine()) != null)
{
  Console.WriteLine(inputLine);
}
```

C.
```
string inputLine;
StreamReader reader = new StreamReader("data.txt");
while ((inputLine = reader.ReadLine()) != null)
{
  Console.WriteLine(inputLine);
}
```

D.
```
string inputLine;
StreamReader reader = null;
try
{
  reader = new StreamReader("data.txt");
  while ((inputLine = reader.ReadLine()) != null)
  {
    Console.WriteLine(inputLine);
  }
  reader.Close();
  reader.Dispose();
}
finally
{
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

Explanation: The StreamReader object must be part of the using statement.

NEW QUESTION 148
DRAG DROP
You are creating a method that saves information to a database.
You have a static class named LogHelper. LogHelper has a method named Log to log the exception. You need to use the LogHelper Log method to log the exception raised by the database server. The solution must ensure that the exception can be caught by the calling method, while preserving the original stack

trace.
How should you write the catch block? (Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.)

```
catch {

catch (SqlException ex) {

catch (FileNotFoundException ex) {

throw;

}

throw new FileNotFoundException();

throw ex;

LogHelper.Log(ex);

throw new SqlException();
```

Answer:

Explanation: Note:
Catch the database exception, log it, and then rethrow it.
* SQLException
An exception that provides information on a database access error or other errors. Example:
catch (SqlException ex)
{
LogHelper.Log(ex); throw;
}

NEW QUESTION 152
HOTSPOT
You have the following code:

```
public class Alert
{
  public event EventHandler<EventArgs> SendMessage;

  public void Execute()
  {
    SendMessage(this, new EventArgs());
  }
}

public class Subscriber
{
  Alert alert = new Alert();

  public void Subscribe()
  {
    alert.SendMessage += (sender, e) => { Console.WriteLine("First"); };
    alert.SendMessage += (sender, e) => { Console.WriteLine("Second"); };
    alert.SendMessage += (sender, e) => { Console.WriteLine("Third"); };
    alert.SendMessage += (sender, e) => { Console.WriteLine("Third"); };
  }

  public void Execute()
  {
    alert.Execute();
  }

  public static void Main()
  {
    Subscriber subscriber = new Subscriber();
    subscriber.Subscribe();
    subscriber.Execute();
  }
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

	Yes	No
If there are no subscribers to the SendMessage event, the Execute method on the Alert class will throw an exception.	○	
When the application runs, "First" will always appear before "Second".	○	
When the application runs, "Third" will be displayed once.	○	

Answer:

Explanation: Explanation for second Answer
Events are multicast delegates and that one has a linked list to store the delegates in. The order of execution is always the same as they are inserted.

NEW QUESTION 156
HOTSPOT
You have the following code:

```
public class Customer
{

    private int CustomerId     { get; set; }
    public string CompanyName { get; set; }
    protected string State       { get; set; }
    public string City        { get; set; }

    public Customer(int customerId, string companyName, string state, string city)
    {
        CustomerId = customerId;
        CompanyName = companyName;
        State = state;
        City = city;
    }
    public  Customer() {}
}
public interface ICustomer
{
    string GetCustomerById(int customerId);
    string GetCustomerByDate(DateTime dateFrom, DateTime dateTo);
}

public class MyCustomerClass : Customer, ICustomer
{
    public string Zip { get; set; }
    public string Phone { get; set; }
    public string GetCustomerById(int customerId)
    {
      ...
    }
    public string GetCustomerByDate(DateTime dateFrom, DateTime dateTo)
    {
      ...
    }
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

	Yes	No
All of the objects derived from MyCustomerClass have CustomerID as a property.	○	○
All of the objects derived from MyCustomerClass have CompanyName as a property.	○	○
All of the objects derived from MyCustomerClass have State as a property.	○	○

Answer:

Explanation: Note:
* CustomerID is declared private.
* CompanyName is declted protected.
* State is declared protected.
The protected keyword is a member access modifier. A protected member is accessible from within the class in which it is declared, and from within any class

derived from the class that declared this member.

NEW QUESTION 158
HOTSPOT
You have the following code (line numbers are included for reference only):

```
01 DataTable dataTable;
02 string connString = "Data Source=192.168.1.100:Initial Catalog=Database1;User Id=sa;Password=p@ssw0rd";
03 using (SqlConnection sqlConn = new SqlConnection(connString))
04 {
05   sqlConn.Open();
06   using (SqlCommand sqlCmd = new SqlCommand())
07   {
08     sqlCmd.Connection = sqlConn;
09     sqlCmd.CommandType = CommandType.StoredProcedure;
10     sqlCmd.CommandText = "p_Procedure1";
11     using (SqlDataAdapter adapter = new SqlDataAdapter(sqlCmd))
12     {
13       using (dataTable = new DataTable())
14       {
15         adapter.Fill(dataTable);
16       }
17     }
18   }
19 }
```

To answer, complete each statement according to the information presented in the code.

The database connection gets closed at line... [▼]
15
16
17
18
19

The adapter object gets disposed at line.. [▼]
15
16
17
18
19

Answer:

Explanation:

The database connection gets closed at line... [▼]
15
16
17
18
19

The adapter object gets disposed at line.. [▼]
15
16
17
18
19

NEW QUESTION 159
You need to store the values in a collection.
The solution must meet the following requirements:
The values must be stored in the order that they were added to the collection. The values must be accessed in a first-in, first-out order.
Which type of collection should you use?

A. SortedList
B. Queue
C. ArrayList
D. Hashtable

Answer: B

Explanation: The Queue class implements a queue as a circular array. Objects stored in a Queue are inserted at one end and removed from the other.
Queues and stacks are useful when you need temporary storage for information; that is, when you might want to discard an element after retrieving its value. Use Queue if you need to access the information in the same order that it is stored in the collection.

Reference: https://msdn.microsoft.com/en-us/library/system.collections.queue(v=vs.110).aspx

NEW QUESTION 163
An application is throwing unhandled NullReferenceException and FormatException errors. The stack trace shows that the exceptions occur in the GetWebResult() method.
The application includes the following code to parse XML data retrieved from a web service. (Line numbers are included for reference only.)

```
01 int GetWebResult(XElement result)
02 {
03   return int.Parse(result.Element("response").Value);
04 }
```

You need to handle the exceptions without interfering with the existing error-handling infrastructure. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Replace line 03 with the following code segment:

```
int returnValue;
int.TryParse(result.Element("response").Value, out returnValue);
return returnValue;
```

B. Replace line 03 with the following code segment:

```
return int.ParseOptions.Safe(result.Element("response").Value);
```

C. Register an event handler with AppDomain.CurrentDomain.UnhandledException.

D. Use a **try...catch** statement to handle the exceptions in the **GetWebResult()** method.

A. Option A
B. Option B
C. Option C
D. Option D

Answer: AC

Explanation: A: The TryParse method is like the Parse method, except the TryParse method does not throw an exception if the conversion fails. It eliminates the need to use exception handling to test for a FormatException in the event that s is invalid and cannot be successfully parsed.
C: UnhandledException event handler
If the UnhandledException event is handled in the default application domain, it is raised there for any unhandled exception in any thread, no matter what application domain the thread started in. If the thread started in an application domain that has an event handler for UnhandledException, the event is raised in that application domain.

NEW QUESTION 166
You are developing a game that allows players to collect from 0 through 1000 coins. You are creating a method that will be used in the game. The method includes the following code. (Line numbers are included for reference only.)
01 public string FormatCoins(string name, int coins) 02 {
03
04 }
The method must meet the following requirements:
Return a string that includes the player name and the number of coins.
Display the number of coins without leading zeros if the number is 1 or greater. Display the number of coins as a single 0 if the number is 0.
You need to ensure that the method meets the requirements. Which code segment should you insert at line 03?

A.
```
return String.Format("Player {0}, collected {1} coins", name, coins.ToString("###0"));
```

B.
```
return String.Format("Player {0} collected {1:000#} coins.", name, coins);
```

C.
```
return String.Format("Player {name} collected {coins.ToString('000')} coins");
```

D.
```
return String.Format("Player {1} collected {2:D3} coins.", name, coins);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

NEW QUESTION 171
You are developing a class named EmployeeRoster. The following code implements the EmployeeRoster class. (Line numbers are included for reference only.)

```
01 public class EmployeeRoster
02 {
03   private Dictionary<string, int> employees = new Dictionary<string, int>();
04   public void Add(string name, int salary)
05   {
06     employees.Add(name, salary);
07   }
08
09 }
```

You create the following unit test method to test the EmployeeRoster class implementation:

```
public void UnitTest1()
{
  EmployeeRoster employeeRoster = new EmployeeRoster();
  employeeRoster.Add("David Jones", 50000);
  employeeRoster.Add("Phyllis Harris", 75000);
  int expectedSalary = 75000;
  int actualSalary = employeeRoster["Phyllis Harris"];
  Assert.AreEqual(expectedSalary, actualSalary);
}
```

You need to ensure that the unit test will pass. What should you do?

A. Insert the following code segment at line 08:

```
public Dictionary<string, int> Employees
{
  get
  {
    return employees;
  }
}
```

B. Insert the following code segment at line 08:

```
public int this[string name]
{
  get
  {
    return employees[name];
  }
}
```

C. Replace line 03 with the following code segment:

```
public Dictionary<string, int> Employees = new Dictionary<string, int>();
```

D. Insert the following code segment at line 08:

```
public int salary(string name)
{
  return employees[name];
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

NEW QUESTION 173
You are developing an application that produces an executable named MyApp.exe and an assembly named MyApp.dll.
The application will be sold to several customers.
You need to ensure that enough debugging information is available for MyApp.exe, so that if the application throws an error in a customer's environment, you can debug the error in your own development environment.
What should you do?

A. Digitally sign MyApp.dll.
B. Produce program database (PDB) information when you compile the code.
C. Compile MyApp.exe by using the /unsafe compiler option.
D. Initializes a new instance of the AssemblyDelaySignAttribute class in the MyApp.dll constructor.

Answer: B

Explanation: A program database (PDB) file holds debugging and project state information that allows incremental linking of a debug configuration of your

program. A PDB file is created when you build with /debug. Reference: Program Database Files (C#, F#, and Visual Basic)
https://msdn.microsoft.com/library/ms241903(v=vs.100).aspx

NEW QUESTION 178
HOTSPOT
You define a class by using the following code:

```
public class Department
{
  public int Id { get; set; }
  public string Name { get; set; }
  public string Manager { get; set; }
  public int BuildingId { get; set; }
}
```

You create a collection by using the following code:

```
Department[] departments =
{
  new Department
   { Id = 1, Name = "Accounting", Manager = "User1", BuildingId = 15 },
  new Department
   { Id = 2, Name = "Sales", Manager = "User2", BuildingId = 3 },
  new Department
   { Id = 3, Name = "IT", Manager = "User3" , BuildingId = 15},
  new Department
   { Id = 4, Name = "Marketing", Manager = "User4", BuildingId = 3}
};
var output =
  from d in departments
  group d by d.BuildingId into dp
  select new { sorted = dp.Key, Department = dp };
```

To answer, complete each statement according to the information presented in the code.

The output collection will contain ... object(s). [▼ 0 / 1 / 2 / 3 / 4]

The sorted property of the output collection will be the ... type. [▼ byte / int / string / var]

Answer:

Explanation:

The output collection will contain ... object(s). [▼ 0 / 1 / **2** / 3 / 4]

The sorted property of the output collection will be the ... type. [▼ byte / **int** / string / var]

NEW QUESTION 181
DRAG DROP
You are developing a C# console application that outputs information to the screen. The following code segments implement the two classes responsible for making calls to the Console object:

```
abstract class BaseLogger
{
  public virtual void Log(string message)
  {
    Console.WriteLine("Base: " + message);
  }
  public void LogCompleted()
  {
    Console.WriteLine("Completed");
  }
}

class Logger : BaseLogger
{
  public override void Log(string message)
  {
    Console.WriteLine(message);
  }
  public new void LogCompleted()
  {
    Console.WriteLine("Finished");
  }
}
```

When the application is run, the console output must be the following text: Log started
Base: Log continuing Finished
You need to ensure that the application outputs the correct text.
Which four lines of code should you use in sequence? (To answer, move the appropriate classes from the list of classes to the answer area and arrange them in the correct order.)

```
logger.Log("Base: Log continuing");
```

```
((BaseLogger)logger).Log("Log continuing");
```

```
var logger = new BaseLogger();
```

```
((Logger)logger).LogCompleted();
```

```
logger.Log("Log started");
```

```
BaseLogger logger = new Logger();
```

```
logger.LogCompleted();
```

Answer:

Explanation: Incorrect:
Not Box 4: logger.LogCompleted();
The output would incorrectly be “Completed”

NEW QUESTION 185
You are troubleshooting an application that uses a class named FullName. The class is decorated with the DataContractAttribute attribute. The application includes the following code. (Line numbers are included for reference only.)

```
01 class Program
02 {
03   MemoryStream WriteName(Name name)
04   {
05     var ms = new MemoryStream();
06     var binary = XmlDictionaryWriter.CreateBinaryWriter(ms);
07     var ser = new DataContractSerializer(typeof(FullName));
08     ser.WriteObject(binary, name);
09
10     return ms;
11   }
12 }
```

You need to ensure that the entire FullName object is serialized to the memory stream object. Which code segment should you insert at line 09?

A. binary.WriteEndDocument();
B. binary.WriteEndDocumentAsync();
C. binary.WriteEndElementAsync();
D. binary.Flush();

Answer: D

Explanation: Example:
MemoryStream stream2 = new MemoryStream();
XmlDictionaryWriter binaryDictionaryWriter = XmlDictionaryWriter.CreateBinaryWriter(stream2); serializer.WriteObject(binaryDictionaryWriter, record1);
binaryDictionaryWriter.Flush(); Incorrect:
Not A: throws InvalidOperationException.
Reference: https://msdn.microsoft.com/en-us/library/ms752244(v=vs.110).aspx

NEW QUESTION 187
You need to write a method that retrieves data from a Microsoft Access 2013 database. The method must meet the following requirements:
Be read-only.
Be able to use the data before the entire data set is retrieved.
Minimize the amount of system overhead and the amount of memory usage. Which type of object should you use in the method?

A. DbDataReader
B. DataContext
C. unTyped DataSet
D. DbDataAdapter

Answer: A

Explanation: DbDataReader Class
Reads a forward-only stream of rows from a data source.
Reference: DbDataReader Class
https://msdn.microsoft.com/en-us/library/system.data.common.dbdatareader(v=vs.110).aspx

NEW QUESTION 188
HOTSPOT
You define a class by using the following code:

```
public class Class1 : IComparable<Class1>
{
  public Int32 ID { get; set; }
  public String Name { get; set; }
  public int CompareTo(Class1 other)
  {
    if(ID == other.ID) return 0;
    else return ID.CompareTo(other.ID);
  }
}
```

You write the following code for a method (line numbers are included for reference only):

```
01 List<Class1> list = new List<Class1>() {
02   new Class1() { ID = 5, Name = "User1" },
03   new Class1() { ID = 6, Name = "User2" },
04   new Class1() { ID = 3, Name = "User3" },
05   new Class1() { ID = 4, Name = "User4" }
06 };
07 Console.WriteLine(list.Count);
08 list.Sort();
09 Console.WriteLine(list[0].Name);
```

To answer, complete each statement according to the information presented in the code.

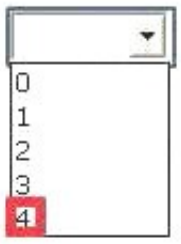
Line 07 of the method will display ... [ ]
- 0
- 1
- 2
- 3
- 4

Line 09 of the method will display ... [ ]
- User1
- User2
- User3
- User4

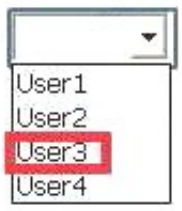
Answer:

Explanation:

Line 07 of the method will display ...



Line 09 of the method will display ...



NEW QUESTION 190
You are creating a console application named App1. App1 will validate user input for order entries.
You are developing the following code segment (line numbers are included for reference only):

```
01 Console.Write("Enter unit price: ");
02 string price = Console.ReadLine();
03
04   Console.WriteLine("Valid price");
05 else
06   Console.WriteLine("Invalid price")
```

You need to complete the code segment.
The solution must ensure that prices are positive and have two decimal places. Which code should you insert at line 03?

A.
```
if (!Regex.IsMatch(price, @"^(-)?\d+(\.\d\d)?$"))
```

B.
```
if (Regex.IsMatch(price, @"^(-)?\d+(\.\d\d)?$"))
```

C.
```
Regex reg = new Regex(@"^\d+(\.\d\d)?$");
if (reg.IsMatch(price))
```

D.
```
Regex reg = new Regex(@"^(-)?\d+(\.\d\d)?$");
if (reg.IsMatch(price))
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Explanation: ^\d+(.\d\d)?$ only allows positive numbers. Incorrect:
^(-)?\d+(.\d\d)?$ allows for negative numbers because of the (-) group

NEW QUESTION 192
You have the following code (line numbers are included for reference only):

```
01 public class Program
02 {
03   private static System.Diagnostics.Stopwatch _execTimer =
04    new System.Diagnostics.Stopwatch();
05   public static void Delay(int delay)
06   {
07     Thread.Sleep(delay);
08   }
09   public static void LogLongExec(string msg)
10   {
11     if (_execTimer.Elapsed.Seconds >= 5)
12     throw new Exception(
13      string.Format("Execution is too long > {0} > {1}",
14      msg, _execTimer.Elapsed.TotalMilliseconds));
15   }
16   public static void Main()
17   {
18     _execTimer.Start();
19     try
20     {
21       Delay(10);
22       LogLongExec("Delay(10)");
23       Delay(5000);
24       LogLongExec("Delay(5000)");
25     }
26     catch (Exception ex)
27     {
28
29     }
30   }
31 }
```

You need to ensure that if an exception occurs, the exception will be logged. Which code should you insert at line 28?

A.
```
#if ERROR
  System.Diagnostics.Trace.TraceError(ex.Message, "ApplicationLog");
#endif
```

B.
```
System.Diagnostics.XmlWriterTraceListener listener =
 new XmlWriterTraceListener("./Error.log");
listener.WriteLine(ex.Message);
listener.Flush();
listener.Close();
```

C.
```
using (System.Diagnostics.XmlWriterTraceListener log1 =
 new XmlWriterTraceListener("./Error.log"))
{
  log1.TraceEvent(
   new TraceEventCache(), ex.Message, TraceEventType.Error, ex.HResult);
  log1.Flush();
}
```

D.
```
System.Diagnostics.TraceSource trace = new TraceSource("./Trace.log");
trace.TraceEvent(TraceEventType.Error, ex.HResult, ex.Message);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Explanation: * XmlWriterTraceListener
Directs tracing or debugging output as XML-encoded data to a TextWriter or to a Stream, such as a FileStream.
* TraceListener.TraceEvent Method (TraceEventCache, String, TraceEventType, Int32) Writes trace and event information to the listener specific output.
Syntax: [ComVisibleAttribute(false)] public virtual void TraceEvent(TraceEventCache eventCache, string source, TraceEventType eventType, int id
)

NEW QUESTION 196
You have the following code:

```
List<Int32> items = new List<int>() {
  100,
  95,
  80,
  75,
  95
};
```

You need to retrieve all of the numbers from the items variable that are greater than 80. Which code should you use?

A.
```
var result = from i in items
  where i > 80
  select i;
```

B.
```
var result = from i in items
  groupby i into grouped
  where grouped.Key > 80
  select i;
```

C.
```
var result = items.Take(80);
```

D.
```
var result = items.Skip(80);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

NEW QUESTION 201
You are creating a console application named Appl.
App1 retrieves data from the Internet by using JavaScript Object Notation (JSON).
You are developing the following code segment (line numbers are included for reference only):

```
01 public bool ValidateJson(string json, Dictionary<string, object> result)
02 {
03
04   try
05   {
06     result = serializer.Deserialize<Dictionary<string, object>>(json);
07     return true;
08   }
09   catch
10   {
11     return false;
12   }
13 }
```

You need to ensure that the code validates the JSON string. Which code should you insert at line 03?

A.
```
DataContractSerializer serializer = new DataContractSerializer();
```

B.
```
var serializer = new NetDataContractSerializer();
```

C.
```
NetDataContractSerializer serializer = new NetDataContractSerializer();
```

D.
```
JavaScriptSerializer serializer = new JavaScriptSerializer();
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

Explanation: The JavaScriptSerializer Class Provides serialization and deserialization functionality for AJAXenabled applications.
The JavaScriptSerializer class is used internally by the asynchronous communication layer to serialize and deserialize the data that is passed between the browser and the Web server. You cannot access that instance of the serializer. However, this class exposes a public API. Therefore, you can use the class when you want to work with JavaScript Object Notation (JSON) in managed code.
Incorrect:
Not B, not C: The NetDataContractSerializer works with XML, but not with JSON.

Reference: JavaScriptSerializer Class https://msdn.microsoft.com/enus/library/system.web.script.serialization.javascriptserializer(v=vs.110).aspx

NEW QUESTION 204
You are modifying an application that processes loans. The following code defines the Loan class. (Line numbers are included for reference only.)

```
01 public class Loan
02 {
03
04   private int _term;
05   private const int MaximumTerm = 10;
06   private const decimal Rate = 0.034m;
07   public int Term
08   {
09     get
10     {
11       return _term;
12     }
13     set
14     {
15       if (value <= MaximumTerm)
16       {
17         _term = value;
18       }
19       else
20       {
21
22       }
23     }
24   }
25 }
26 public delegate void MaximumTermReachedHandler(object source, EventArgs e);
```

Loans are restricted to a maximum term of 10 years. The application must send a notification message if a loan request exceeds 10 years.
You need to implement the notification mechanism.
Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Insert the following code segment at line 03:

```
public string MaximumTermReachedEvent { get; set; }
```

B. Insert the following code segment at line 21:

```
if (OnMaximumTermReached != null)
{
  OnMaximumTermReached(this, new EventArgs());
}
```

C. Insert the following code segment at line 03:

```
private string MaximumTermReachedEvent;
```

D. Insert the following code segment at line 03:

```
public event MaximumTermReachedHandler OnMaximumTermReached;
```

E. Insert the following code segment at line 21:

```
value = MaximumTerm;
```

F. Insert the following code segment at line 21:

```
value = 9;
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: BD

NEW QUESTION 207
You are developing an application that generates code. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public string GenerateCode(string className,string methodName)
02 {
03   ...
04   var ct = new CodeTypeDeclaration(className);
05
06   ...
07 }
```

You need to ensure that code generated by the GenerateCode() method represents a class that can be accessed by all objects in its application domain.
Which two code segments can you insert at line 05 to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

A.
```
ct.Attributes = MemberAttributes.Public;
```

B.
```
ct.IsStruct = true;
ct.Attributes = MemberAttributes.Public;
```

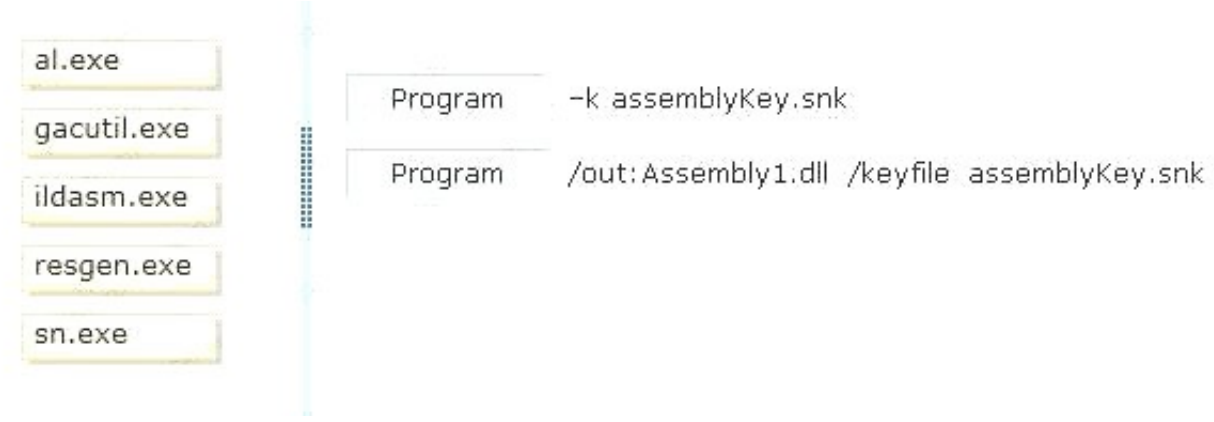
C.
```
ct.IsClass = true;
ct.Attributes = MemberAttributes.Public;
```

D.
```
ct.IsClass = true;
ct.Attributes = MemberAttributes.Private;
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: AC

NEW QUESTION 212
DRAG DROP
You create an assembly named Assembly1.dll.
You need to ensure that Assembly1.dll can be deployed to the global assembly cache (GAC). Which commands should you run? (To answer, drag the appropriate programs to the correct locations. Each program may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)



Answer:

Explanation: The al.exe command has the /out and /keyfile options. Incorrect:
gacutil.exe command does not have the /out and /keyfile options.
Reference: https://msdn.microsoft.com/en-us/library/ex0ss12c(v=vs.110).aspx

NEW QUESTION 215
DRAG DROP
You have an application that uses paging. Each page displays 10 items from a list.
You need to display the third page. (Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.)

```
.Skip(2)

.First(10)

.Take(10)

var page = items

.Take(1)

.Skip(30)

int page = items

.Skip(20)
```

Answer:

Explanation: Skip the first two page (first 20 items) then select the next page (next 10 items),
* Use the Take operator to return a given number of elements in a sequence and then skip over the remainder.
Use the Skip operator to skip over a given number of elements in a sequence and then return the remainder.

NEW QUESTION 217
DRAG DROP
You have a method that will evaluate a parameter of type Int32 named Status. You need to ensure that the method meets the following requirements:
If Status is set to Active, the method must return 1. If Status is set to Inactive, the method must return 0.
If Status is any other value, the method must return -1.
What should you do? (To answer, drag the appropriate statement to the correct location in the answer area. Each statement may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```
break;
case "Active":
case "Inactive"
default:
goto default;
return
```

```
Int32 returnStatus = Int32.MinValue;
switch (status) {
    Statement
    returnStatus = 1;
    Statement
    Statement
    returnStatus = 0;
    Statement
    Statement
    returnStatus = -1;
    Statement
}
return returnStatus;
```

Answer:

Explanation: Example:
int caseSwitch = 1; switch (caseSwitch)
{
case 1:
Console.WriteLine("Case 1"); break;
case 2:
Console.WriteLine("Case 2"); break;
default: Console.WriteLine("Default case"); break;
}
Reference: switch (C# Reference) https://msdn.microsoft.com/en-us/library/06tc147t.aspx

NEW QUESTION 218
You are developing an application that uses multiple asynchronous tasks to optimize performance. You need to retrieve the result of an asynchronous task.
Which code segment should you use?

A.
```
protected async void StartTask()
{
  string result = await GetData();
  ...
}
public Task<string> GetData()
{
  ...
}
```

B.
```
protected async void StartTask()
{
  string result = GetData();
  ...
}
public Task<string> GetData()
{
  ...
}
```

C.
```
protected async void StartTask()
{
  string result = await GetData();
  ...
}
public async Task<string> GetData()
{
  ...
}
```

D.
```
protected async void StartTask()
{
  string result = async GetData();
  ...
}
public await Task<string> GetData()
{
  ...
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Explanation: Use the async modifier to specify that a method, lambda expression, or anonymous method is asynchronous. If you use this modifier on a method or expression, it's referred to as an async method.
Example:
public async Task<int> ExampleMethodAsync()
{
// . . . .
}
Reference: async (C# Reference) https://msdn.microsoft.com/en-us/library/hh156513.aspx

NEW QUESTION 219
You are developing an application.
The application contains the following code:

```
class Program
{
  static void ProcessOrders (string orderRefNumber)
  {
    if (orderRefNumber == null)
    {
      throw new ArgumentNullException();
    }
    ...
  }

  static void Main()
  {
    try
    {
      string orderRefNumber = null;
      ProcessOrders(orderRefNumber);
    }
    catch (ArgumentNullException e)
    {
      Console.WriteLine("{0} An exception caught.", e);
    }

    catch (Exception e)
    {
      Console.WriteLine("{0} An exception caught.", e);
    }
  }
}
```

When you compile the code, you receive the following syntax error message: "A previous catch clause already catches all exceptions of this or a super type ('System.Exception')."
You need to ensure that the code can be compiled. What should you do?

A. Catch the ArgumentException exception instead of the ArgumentNullException exception.
B. Throw a new exception in the second catch block.
C. Catch the ArgumentNullException exception first.
D. Re-throw the exception caught by the second catch block.

Answer: A

NEW QUESTION 224
You have an application that accesses a Web server named Server1.
You need to download an image named Image1.jpg from Server1 and store the image locally as File1.jpg.
Which code should you use?

A.
```
WebRequest request = HttpWebRequest.Create("http://server1/image1.jpg");
StreamWriter writer = new StreamWriter(request.GetResponse().GetResponseStream());
writer.WriteLine("C:\\file1.jpg");
writer.Dispose();
```

B.
```
WebClient client = new WebClient();
StreamWriter writer = new StreamWriter("C:\\file1.jpg");
writer.Write(client.DownloadData("http://server1/image1.jpg"));
writer.Dispose();
client.Dispose();
```

C.
```
WebClient client = new WebClient();
client.DownloadFile("http://server1/image1.jpg", "C:\\file1.jpg");
client.Dispose();
```

D.
```
WebRequest request = HttpWebRequest.Create("http://server1/image1.jpg");
StreamWriter writer = new StreamWriter(request.GetResponse().GetResponseStream());
writer.Write("C:\\file1.jpg");
writer.Dispose();
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

NEW QUESTION 229
You are implementing a new method named ProcessData. The ProcessData() method calls a thirdparty component that performs a long-running operation to retrieve stock information from a web
service.
The third-party component uses the IAsyncResult pattern to signal completion of the long-running operation so that the UI can be updated with the new values.
You need to ensure that the calling code handles the long-running operation as a System.Threading.Tasks.Task object to avoid blocking the UI thread.

Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Create a TaskCompletionSource<T> object.
B. Call the component by using the TaskFactory.FromAsync() method.
C. Apply the following attribute to the ProcessData() method signature: [MethodImpl(MethodImplOptions.Synchronized)]
D. Apply the async modifier to the ProcessData() method signature.

Answer: AB

Explanation: A: In many scenarios, it is useful to enable a Task<TResult> to represent an external asynchronous operation. TaskCompletionSource<TResult> is provided for this purpose. It enables the creation of a task that can be handed out to consumers, and those consumers can use the members of the task as they would any other. However, unlike most tasks, the state of a task created by a TaskCompletionSource is controlled explicitly by the methods on TaskCompletionSource. This enables the completion of the external asynchronous operation to be propagated to the underlying Task. The separation also ensures that consumers are not able to transition the state without access to the corresponding TaskCompletionSource.
B: TaskFactory.FromAsync Method
Creates a Task that represents a pair of begin and end methods that conform to the Asynchronous Programming Model pattern. Overloaded.
Example:
TaskFactory.FromAsync Method (IAsyncResult, Action<IAsyncResult>)
Creates a Task that executes an end method action when a specified IAsyncResult completes. Note:
* System.Threading.Tasks.Task Represents an asynchronous operation.

NEW QUESTION 231
You are developing a class named Account that will be used by several applications.
The applications that will consume the Account class will make asynchronous calls to the Account class to execute several different methods.
You need to ensure that only one call to the methods is executed at a time. Which keyword should you use?

A. sealed
B. protected
C. checked
D. lock

Answer: D

Explanation: The lock keyword ensures that one thread does not enter a critical section of code while another thread is in the critical section. If another thread tries to enter a locked code, it will wait, block, until the object is released.
Reference: lock Statement (C# Reference) https://msdn.microsoft.com/en-us/library/c5kehkcz.aspx

NEW QUESTION 232
You are developing an application by using C#. The application will write events to an event log. You plan to deploy the application to a server.
You create an event source named MySource and a custom log named MyLog on the server. You need to write events to the custom log.
Which code segment should you use?

A.
```
public void WriteToEventLog(string message)
{
  EventLog eventLog = new EventLog() { Source = "Application" };
  eventLog.WriteEntry(message);
}
```

B.
```
public void WriteToEventLog(string message)
{
  EventLog eventLog = new EventLog() { Source = "MyLog", EnableRaisingEvents = true };
  EventInstance eventInstance = new EventInstance(0, 1);
  eventLog.WriteEvent(eventInstance, message);
}
```

C.
```
public void WriteToEventLog(string message, EventLogEntryType eventLogEntryType)
{
  EventLog eventLog = new EventLog() { Source = "MyLog" };
  eventLog.WriteEntry(message, eventLogEntryType);
}
```

D.
```
public void WriteToEventLog(string message, EventLogEntryType eventLogEntryType)
{
  EventLog eventLog = new EventLog() { Source = "MySource", EnableRaisingEvents = true };
  eventLog.WriteEntry(message, eventLogEntryType);
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

NEW QUESTION 235
You plan to store passwords in a Windows Azure SQL Database database.
You need to ensure that the passwords are stored in the database by using a hash algorithm, Which cryptographic algorithm should you use?

A. ECDSA

B. RSA-768
C. AES-256
D. SHA-256

Answer: D

Explanation: Secure Hash Algorithm is a cryptographic hash function. Incorrect:
Not B: EDCA is an encryption algorithm. Not B: RSA is an encryption algorithm. Not C: AES is an encryption algorithm.
Reference: https://en.wikipedia.org/wiki/SHA-1

NEW QUESTION 240
HOTSPOT
You have an existing order processing system that accepts .xml files,
The following code shows an example of a properly formatted order in XML:

```
<Order OrderID="42">
  <Customer>Ben Smith</Customer>
  <CustomerID>206</CustomerID>
  <OrderDate>2013-04-19T09:13:14.7265994-05:00</OrderDate>
</Order>
```

You create the following class that will be serialized:

```
[DataContract()]
public class Order
{
  [DataMember()]
  public Int32 OrderID { get; set; }

  [DataMember(Name = "Customer")]
  public String CustomerName { get; set; }

  [DataMember()]
  private Int32 CustomerID { get; set; }

  public DateTime OrderDate { get; set; }
}
```

For each of the following properties, select Yes if the property is serialized according to the defined schema. Otherwise, select No.

	Yes	No
OrderID	○	○
OrderDate	○	○
CustomerName	○	○

Answer:

Explanation: OrderId – NO (this will serialize as an element, not as aa attribute)
OrderDate – NO (doesn't have DataMember attribute, thus is completely ignored) CustomerName – YES (DataMember is set correctly)

NEW QUESTION 244
You need to write a console application that meets the following requirements:
If the application is compiled in Debug mode, the console output must display Entering debug mode. If the application is compiled in Release mode, the console output must display Entering release mode.
Which code should you use?

A.
```
#if (TRACE)
  Console.WriteLine("Entering debug mode");
#else
  Console.WriteLine("Entering release mode");
#endif
```

B.
```
#if (DEBUG)
  Console.WriteLine("Entering debug mode");
#else
  Console.WriteLine("Entering release mode");
#endif
```

C.
```
if(System.Diagnostics.Debugger.IsAttached)
  Console.WriteLine("Entering debug mode");
else
  Console.WriteLine("Entering release mode");
```

D.
```
#region DEBUG
  Console.WriteLine("Entering debug mode");
#endregion
#region RELEASE
  Console.WriteLine("Entering release mode");
#endregion
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

Explanation: When the C# compiler encounters an #if directive, followed eventually by an #endif directive, it will compile the code between the directives only if the specified symbol is defined. Unlike C and C++, you cannot assign a numeric value to a symbol; the #if statement in C# is Boolean and only tests whether the symbol has been defined or not. For example,
#define DEBUG
// ...
#if DEBUG
Console.WriteLine("Debug version");
#endif

NEW QUESTION 247
DRAG DROP
You are adding a method to an existing application. The method uses an integer named statusCode as an input parameter and returns the status code as a string. The method must meet the following requirements: Return "Error" if the statusCode is 0.
Return "Success" if the statusCode is 1.
Return "Unauthorized" if the statusCode is any value other than 0 or l. You need to implement the method to meet the requirements.
How should you complete the relevant code? (To answer, drag the appropriate statements to the correct locations in the answer area. Each statement may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

default
switch
break
case

```
string statusText;
        (statusCode)
{
    0:
        statusText = "Error";
            ;
    1:
        statusText = "Success";
            ;
        :
        statusText = "Unauthorized";
            ;
}
return statusText;
```

Answer:

Explanation: Example:
int caseSwitch = 1; switch (caseSwitch)
{
case 1:
Console.WriteLine("Case 1"); break;
case 2:
Console.WriteLine("Case 2"); break;
default: Console.WriteLine("Default case"); break;
}
Reference: switch (C# Reference) https://msdn.microsoft.com/en-us/library/06tc147t.aspx

NEW QUESTION 248
You have the following class (line numbers are included for reference only):

```
01 public class Class1
02 {
03   private String value = String.Empty;
04   private ServiceProxy proxy = new ServiceProxy();
05
06   public String Value
07   {
08     get {return value;}
09   }
10   public void Modify(Object newValue)
11   {
12
13     value += proxy.Update(newValue.ToString());
14   }
15 }
16 public class Test
17 {
18   public void Execute()
19   {
20     Class1 class1 = new Class1();
21     (new ParameterizedThreadStart(class1.Modify)).Invoke(1);
22     (new ParameterizedThreadStart(class1.Modify)).Invoke(2);
23     (new ParameterizedThreadStart(class1.Modify)).Invoke(3);
24     Console.WriteLine(class1.Value);
25   }
26 }
```

ServiceProxy is a proxy for a web service. Calls to the Update method can take up to five seconds. The Test class is the only class the uses Class1.
You run the Execute method three times, and you receive the following results:
213
312
231
You need to ensure that each value is appended to the Value property in the order that the Modify methods are invoked.
What should you do?

A. Insert the following at line 5:
```
Object obj1 = new Object();
```
Insert the following at line 12:
```
Monitor.Enter(obj1);
```

B. Insert the following at line 5:
```
Object obj1 = new Object();
```
Insert the following at line 12:
```
lock (obj1)
```

C. Insert the following at line 12:
```
Monitor.Enter(this);
```

D. Insert the following at line 12:
```
lock (value)
```

A. Option A
B. Option B
C. Option C
D. Option D

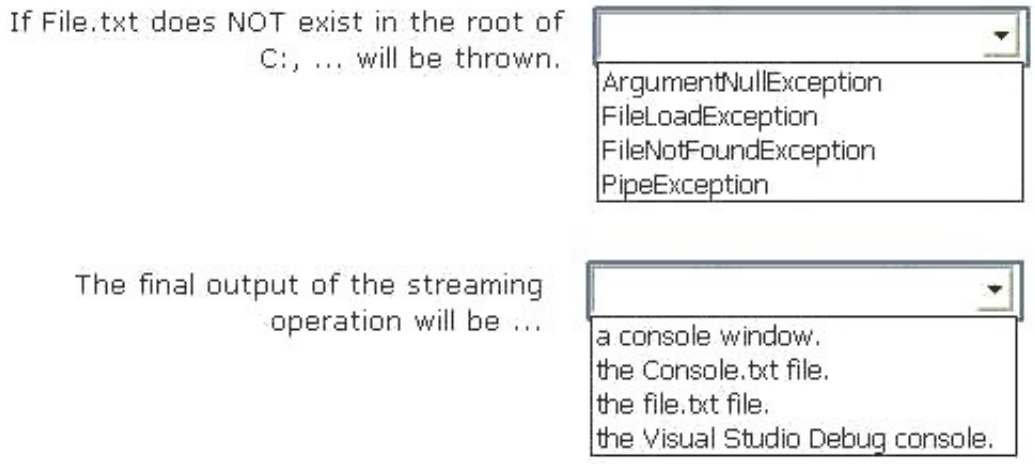
Answer: B

Explanation: Need to lock statement. The lock keyword marks a statement block as a critical section by obtaining the mutual-exclusion lock for a given object, executing a statement, and then releasing the lock. Reference: lock Statement (C# Reference) https://msdn.microsoft.com/en-us/library/c5kehkcz.aspx

NEW QUESTION 251
HOTSPOT
You have the following code (line numbers are included for reference only):

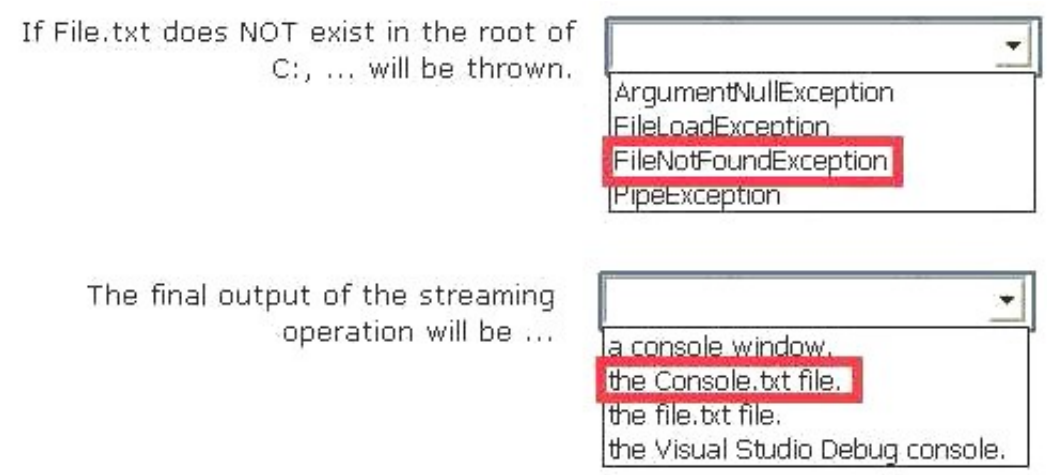
```
01 using (StreamWriter writer = new StreamWriter(@"C:\console.txt"))
02 {
03   Console.SetOut(writer);
04   using (FileStream stream = new FileStream(@"C:\file.txt", FileMode.Open))
05   {
06     using (StreamReader reader = new StreamReader(stream))
07     {
08       while (!reader.EndOfStream) Console.WriteLine(reader.ReadLine());
09     }
010  }
011 }
```

To answer, complete each statement according to the information presented in the code.



Answer:

Explanation:



NEW QUESTION 253
You are developing an application in C#.
The application uses exception handling on a method that is used to execute mathematical calculations by using integer numbers.
You write the following catch blocks for the method (line numbers are included for reference only):

```
01
02 catch(ArithmeticException e) {Console.WriteLine("Arithmetic error");}
03
04 catch(ArgumentException e) {Console.WriteLine("Bad Argument");}
05
06 catch(Exception e) {Console.WriteLine("General error");}
07
```

You need to add the following code to the method:

```
catch(DivideByZeroException e) {Console.WriteLine("Divide by zero");}
```

At which line should you insert the code?

A. 01
B. 03
C. 05
D. 07

Answer: A

Explanation: Use the most specific exception first.

NEW QUESTION 257
You are developing an application that uses multiple asynchronous tasks to optimize performance. The application will be deployed in a distributed environment.
You need to retrieve the result of an asynchronous task that retrieves data from a web service. The data will later be parsed by a separate task.
Which code segment should you use?

A.
```
protected async void StartTask()
{
  string result = await GetData();
  ...
}
public Task<string> GetData()
{
  ...
}
```

B.
```
protected async void StartTask()
{
  string result = await GetData();
  ...
}
public async Task<string> GetData()
{
  ...
}
```

C.
```
protected async void StartTask()
{
  string result = GetData();
  ...
}
public Task<string> GetData()
{
  ...
}
```

D.
```
protected async void StartTask()
{
  string result = async GetData();
  ...
}
public await Task<string> GetData()
{
  ...
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B
Explanation: Example:
// Signature specifies Task<TResult>
async Task<int> TaskOfTResult_MethodAsync()
{
int hours;
// . . .
// Return statement specifies an integer result. return hours;
}
// Calls to TaskOfTResult_MethodAsync
Task<int> returnedTaskTResult = TaskOfTResult_MethodAsync(); int intResult = await returnedTaskTResult;
// or, in a single statement
int intResult = await TaskOfTResult_MethodAsync();
// Signature specifies Task
async Task Task_MethodAsync()
{
// . . .
// The method has no return statement.
}
// Calls to Task_MethodAsync
Task returnedTask = Task_MethodAsync(); await returnedTask;
// or, in a single statement await Task_MethodAsync();
Reference: Asynchronous Programming with Async and Await (C# and Visual Basic) https://msdn.microsoft.com/en-us/library/hh191443.aspx

NEW QUESTION 260
You are implementing a method named GetValidPhoneNumbers. The GetValidPhoneNumbers() method processes a list of string values that represent phone

numbers.
The GetValidPhoneNumbers() method must return only phone numbers that are in a valid format. You need to implement the GetValidPhoneNumbers() method.
Which two code segments can you use to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

A.
```
private static List<String> GetValidPhoneNumbers(string input, string pattern)
{
  var regex = new Regex(pattern);
  var matches = regex.Matches(input);
  var validPhoneNumbers = new List<String>();
  foreach(Match match in matches)
  {
    if(match.Success)
    {
      validPhoneNumbers.Add(match.Value);
    }
  }
  return validPhoneNumbers;
}
```

B.
```
private static List<String> GetValidPhoneNumbers(string input, string pattern)
{
  var regex = new Regex(pattern);
  var matches = regex.Matches(input);
  return (from Match match in matches where match.Success select match.Value).ToList();
}
```

C.
```
private static List<String> GetValidPhoneNumbers(string input, string pattern)
{
  var regex = new Regex(pattern);
  var matches = regex.Matches(input);
  return (from Match match in matches where match.Success select match.Success.ToString()).ToList();
}
```

D.
```
private static List<String> GetValidPhoneNumbers(string input, string pattern)
{
  var regex = new Regex(pattern);
  var matches = regex.Matches(input);
  var validPhoneNumbers = new List<String>();
  foreach(Match match in matches)
  {
    if(!match.Success)
    {
      validPhoneNumbers.Add(match.Value);
    }
  }
  return validPhoneNumbers;
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: AB

Explanation: * Regex.Matches
Searches an input string for all occurrences of a regular expression and returns all the matches.
* MatchCollection
Represents the set of successful matches found by iteratively applying a regular expression pattern to the input string.
The collection is immutable (read-only) and has no public constructor. The Regex.Matches method returns a MatchCollection object.
* List<T>.Add Method
Adds an object to the end of the List<T>.

NEW QUESTION 262
DRAG DROP
You are developing an application that will write data to a file. The application includes the following code segment. (Line numbers are included for reference only.)
* Missing code *
You need to ensure that the WriteData() method will write data to a file.
Which four code segments should you insert in sequence at line 03? (To answer, move the appropriate code segments from the list of code segments to the answer area and arrange them in the correct order.)

```
writer.Write(data);
```

```
writer = new StreamWriter(fileName);
```

```
StreamWriter writer = null;
```

```
writer.Close();
```

```
writer.Open();
```

Answer:

Explanation: Note:

* StreamWriter Constructor (String)
Initializes a new instance of the StreamWriter class for the specified file by using the default encoding and buffer size.
Incorrect:
The StreamWriter class has no method Open.

NEW QUESTION 266
You need to create a method that can be called by using a varying number of parameters. What should you use?

A. derived classes
B. interface
C. enumeration
D. method overloading

Answer: D

Explanation: Member overloading means creating two or more members on the same type that differ only in the number or type of parameters but have the same name.
Overloading is one of the most important techniques for improving usability, productivity, and readability of reusable libraries. Overloading on the number of parameters makes it possible to provide simpler versions of constructors and methods. Overloading on the parameter type makes it possible to use the same member name for members performing identical operations on a selected set of different types.

NEW QUESTION 268
You are creating an application that reads from a database.
You need to use different databases during the development phase and the testing phase by using conditional compilation techniques.
What should you do?

A. Configure the Define TRACE constant setting in Microsoft Visual Studio.
B. Decorate the code by using the [DebuggerDisplay("Mydebug")] attribute.
C. Configure the Define DEBUG constant setting in Microsoft Visual Studio.
D. Disable the strong-name bypass feature of Microsoft .NET Framework in the registry.

Answer: C

Explanation: Use one debug version to connect to the development database, and a standard version to connect to the live database.

NEW QUESTION 273
You are creating a class library that will be used in a web application. You need to ensure that the class library assembly is strongly named. What should you do?

A. Use the csc.exe /target:Library option when building the application.
B. Use the AL.exe command-line tool.
C. Use the aspnet_regiis.exe command-line tool.
D. Use the EdmGen.exe command-line tool.

Answer: B

Explanation: The Windows Software Development Kit (SDK) provides several ways to sign an assembly with a strong name:
* Using the Assembly Linker (Al.exe) provided by the Windows SDK.
* Using assembly attributes to insert the strong name information in your code. You can use either the AssemblyKeyFileAttribute or the AssemblyKeyNameAttribute, depending on where the key file to be used is located.
* Using compiler options such /keyfile or /delaysign in C# and Visual Basic, or the /KEYFILE or /DELAYSIGN linker option in C++. (For information on delay signing, see Delay Signing an Assembly.) Note:
* A strong name consists of the assembly's identity—it’s simple text name, version number, and culture information (if provided)—plus a public key and a digital signature. It is generated from an assembly file (the file that contains the assembly manifest, which in turn contains the names and hashes of all the files that make up the assembly), using the corresponding private key. Microsoft® Visual Studio® .NET and other development tools provided in the .NET Framework SDK can assign strong names to an assembly. Assemblies with the same strong name are expected to be identical.

NEW QUESTION 277
You are developing an application that includes methods named EvaluateLoan, ProcessLoan, and FundLoan. The application defines build configurations named TRIAL, BASIC, and ADVANCED.
You have the following requirements:
The TRIAL build configuration must run only the EvaluateLoan() method. The BASIC build configuration must run all three methods.
The ADVANCED build configuration must run only the EvaluateLoan() and ProcessLoan() methods. You need to meet the requirements.
Which code segment should you use?

A.
```
#if TRIAL
#warning EvaluateLoan();
#error ProcessLoan();
#error FundLoan();
#elif ADVANCED
#warning EvaluateLoan();
#warning ProcessLoan();
#warning FundLoan();
#else
#warning EvaluateLoan();
#warning ProcessLoan();
#error FundLoan();
#endif
```

B.
```
#if TRIAL
  EvaluateLoan();
#elif ADVANCED
  EvaluateLoan();
  ProcessLoan();
  FundLoan();
#else
  EvaluateLoan();
  ProcessLoan();
#endif
```

C.
```
#if TRIAL
  EvaluateLoan();
#elif BASIC
  EvaluateLoan();
  ProcessLoan();
  FundLoan();
#else
  EvaluateLoan();
  ProcessLoan();
#endif
```

D.
```
#if TRIAL
  EvaluateLoan();
#elif BASIC
  EvaluateLoan();
  ProcessLoan();
#error FundLoan();
#else
  EvaluateLoan();
  ProcessLoan();
  FundLoan();
#endif
```

A. Option A
B. Option B
C. Option C

Answer: C

Explanation: Incorrect:
Not B: The BASIC configuration must run all three methods. Not D: The BASIC configuration must run all three methods.

NEW QUESTION 280
You are developing an application that will be deployed to multiple computers. You set the assembly name.
You need to create a unique identity for the application assembly.
Which two assembly identity attributes should you include in the source code? (Each correct answer presents part of the solution. Choose two.)

A. AssemblyDelaySignAttribute
B. AssemblyCompanyAttribute
C. AssemblyProductAttribute
D. AssemblyCultureAttribute
E. AssemblyVersionAttribute

Answer: DE

Explanation: The AssemblyName object contains information about an assembly, which you can use to bind to that assembly. An assembly's identity consists of the following:
Simple name. Version number.
Cryptographic key pair. Supported culture.
D: AssemblyCultureAttribute
Specifies which culture the assembly supports.
The attribute is used by compilers to distinguish between a main assembly and a satellite assembly. A main assembly contains code and the neutral culture's resources. A satellite assembly contains only resources for a particular culture, as in [assembly:AssemblyCultureAttribute("de")]
E: AssemblyVersionAttribute
Specifies the version of the assembly being attributed.

The assembly version number is part of an assembly's identity and plays a key part in binding to the assembly and in version policy.

NEW QUESTION 285
You develop an application by using C#. The application counts the number of times a specific word appears within a set of text files. The application includes the following code. (Line numbers are included for reference only.)

```
01 class Counter
02 {
03   System.Collections.Concurrent.ConcurrentDictionary<string, int> _wordCounts =
04     new System.Collections.Concurrent.ConcurrentDictionary<string, int>();
05   public Action<DirectoryInfo> ProcessDirectory()
06   {
07     return (dirInfo =>
08     {
09       var files = dirInfo.GetFiles("*.cs").AsParallel<FileInfo>();
10       files.ForAll<FileInfo>(
11        fileInfo =>
12        {
13          var fileContent = File.ReadAllText(fileInfo.FullName);
14          var sb = new StringBuilder();
15          foreach (var val in fileContent)
16          {
17            sb.Append(char.IsLetter(val) ? val.ToString().ToLowerInvariant() : " ");
18          }
19          string[] wordsInFile = sb.ToString().Split(new []{' '},
20           StringSplitOptions.RemoveEmptyEntries);
21          foreach (var word in wordsInFile)
22          {
23
24          }
25        });
26       var directories = dirInfo.GetDirectories().AsParallel<DirectoryInfo>();
27       directories.ForAll<DirectoryInfo>(ProcessDirectory());
28     });
29   }
30 }
```

You have the following requirements:
Populate the _wordCounts object with a list of words and the number of occurrences of each word. Ensure that updates to the ConcurrentDictionary object can happen in parallel.
You need to complete the relevant code.
Which code segment should you insert at line 23?

A.
```
_wordCounts.AddOrUpdate(word, 1, (s, n) => n + 1);
```

B.
```
int value;
if (_wordCounts.TryGetValue(word, out value))
{
  _wordCounts[word] = value++;
}
else
{
  _wordCounts[word] = 1;
}
```

C.
```
var value = _wordCounts.GetOrAdd(word, 0);
_wordCounts[word] = value++;
```

D.
```
var value = _wordCounts.GetOrAdd(word, 0);
_wordCounts.TryUpdate(word, value + 1, value);
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

Explanation: The ConcurrentDictionary<TKey,TValue>.AddOrUpdate method adds a key/value pair to the ConcurrentDictionary<TKey,TValue> if the key does not already exist, or updates a key/value pair in the ConcurrentDictionary<TKey,TValue> if the key already exists.
Example:
// Construct a ConcurrentDictionary
ConcurrentDictionary<int, int> cd = new ConcurrentDictionary<int, int>();
// Bombard the ConcurrentDictionary with 10000 competing AddOrUpdates Parallel.For(0, 10000, i =>
{
// Initial call will set cd[1] = 1.
// Ensuing calls will set cd[1] = cd[1] + 1 cd.AddOrUpdate(1, 1, (key, oldValue) => oldValue + 1);
});
Console.WriteLine("After 10000 AddOrUpdates, cd[1] = {0}, should be 10000", cd[1]); Reference: ConcurrentDictionary<TKey,TValue>.AddOrUpdate Method
https://msdn.microsoft.com/en-us/library/ee378665(v=vs.110).aspx

NEW QUESTION 289
You are developing an application that will use multiple asynchronous tasks to optimize performance.
You create three tasks by using the following code segment. (Line numbers are included for reference only.)

```
01 protected void ProcessTasks()
02 {
03   Task[] tasks = new Task[3]
04   {
05     Task.Factory.StartNew(() => MethodA()),
06     Task.Factory.StartNew(() => MethodB()),
07     Task.Factory.StartNew(() => MethodC())
08   };
09
10   ...
11 }
```

You need to ensure that the ProcessTasks() method waits until all three tasks complete before continuing.
Which code segment should you insert at line 09?

A. Task.WaitFor(3);
B. tasks.Yield();
C. tasks.WaitForCompletion();
D. Task.WaitAll(tasks);

Answer: D

Explanation: The Task.WaitAll method (Task[]) waits for all of the provided Task objects to complete execution. Example:
// Construct started tasks
Task<int>[] tasks = new Task<int>[n]; for (int i = 0; i < n; i++)
{
tasks[i] = Task<int>.Factory.StartNew(action, i);
}
// Exceptions thrown by tasks will be propagated to the main thread
// while it waits for the tasks. The actual exceptions will be wrapped in AggregateException. try
{
// Wait for all the tasks to finish. Task.WaitAll(tasks);
// We should never get to this point
Console.WriteLine("WaitAll() has not thrown exceptions. THIS WAS NOT EXPECTED.");
}
Reference: Task.WaitAll Method (Task[]) https://msdn.microsoft.com/en-us/library/dd270695(v=vs.110).aspx

NEW QUESTION 294
You are developing a C# application. The application includes the following code segment, (Line numbers are included for reference only.)

```
01 class Beam
02 {
03   public string Description { get; set; }
04   public int Weight { get; set; }
05   public int Id { get; set; }
06   public decimal Length { get; set; }
07 }
08 Dictionary<int, Beam> beams = new Dictionary<int, Beam>
09 {
10   { 111, new Beam { Description = "Iron", Weight = 4297, Id = 211, Length = 22.23m } },
11   { 112, new Beam { Description = "Copper", Weight = 6822, Id = 317, Length = 11.13m } },
12   { 113, new Beam { Description = "Steel", Weight = 88021, Id = 198, Length = 7.91m } },
13   { 114, new Beam { Description = "Titanium", Weight = 14014, Id = 192, Length = 17.13m } },
14   { 115, new Beam { Description = "Aluminum", Weight = 3263, Id = 196, Length = 8.45m } }
15 };
16
17 beams.Add(115, new Beam { Description = "Brass", Weight = 24331, Id = 214, Length = 28.15m });
18
```

The application fails at line 17 with the following error message: "An item with the same key has already been added."
You need to resolve the error.
Which code segment should you insert at line 16?

A.
```
if (!beams.ContainsKey(115))
```

B.
```
foreach (Beam beam in beams.Values.Where(t => t.Id != 115))
```

C.
```
foreach (KeyValuePair<int, Beam> key in beams.Where(t => t.Key != 115))
```

D.
```
foreach (int key in beams.Keys.Where(k => k != 115))
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: A

Explanation: The dictionary<TKey,TValue>.ContainsKey method (TKey) determines whether the Dictionary<TKey,TValue> contains the specified key.
Reference: Dictionary<TKey, TValue>.ContainsKey Method (TKey) https://msdn.microsoft.com/en-us/library/kw5aaea4(v=vs.110).aspx

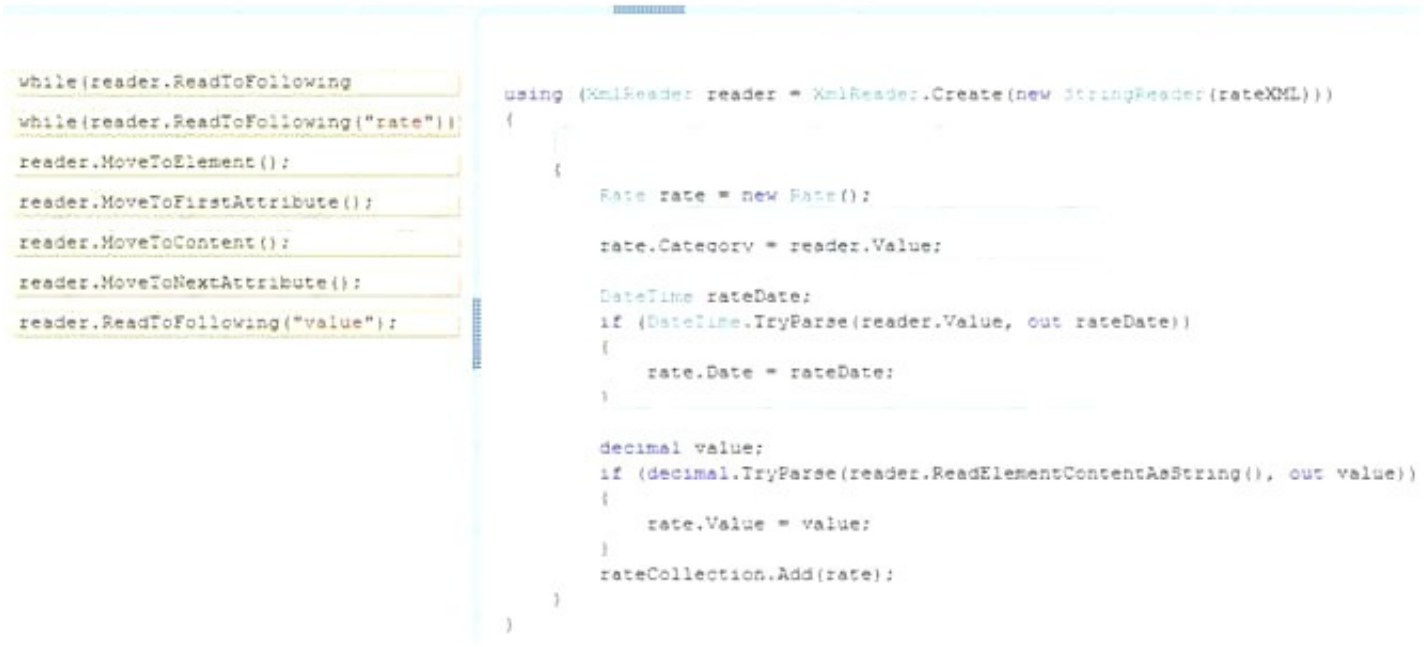
NEW QUESTION 296
DRAG DROP
You are developing a C# application. The application includes a class named Rate. The following code segment implements the Rate class:

```
public class Rate
{
  public string Category { get; set; }
  public DateTime Date { get; set; }
  public decimal Value { get; set; }
}
```

You define a collection of rates named rateCollection by using the following code segment: Collection<Rate> rateCollection = new Collection<Rate>() ;
The application receives an XML file that contains rate information in the following format:

```
<?xml version="1.0" encoding="utf-8" ?>
<RateSheet>
  <rate category="buyout" date="2012-03-22">
    <value>0.0375</value>
  </rate>
  <rate category="fixed" date="2012-03-23">
    <value>0.0475</value>
  </rate>
</RateSheet>
```

You need to parse the XML file and populate the rateCollection collection with Rate objects.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)



Answer:

Explanation: * Target 1: The element name is rate not Ratesheet.
The Xmlreader readToFollowing reads until the named element is found.
* Target 2:
The following example gets the value of the first attribute. reader.ReadToFollowing("book"); reader.MoveToFirstAttribute();
string genre = reader.Value; Console.WriteLine("The genre value: " + genre);
* Target 3, Target 4:
The following example displays all attributes on the current node.
C#VB
if (reader.HasAttributes) {
Console.WriteLine("Attributes of <" + reader.Name + ">"); while (reader.MoveToNextAttribute()) { Console.WriteLine(" {0}={1}", reader.Name, reader.Value);
}
// Move the reader back to the element node. reader.MoveToElement();
}
The XmlReader.MoveToElement method moves to the element that contains the current attribute node.
Reference: XmlReader Methods
https://msdn.microsoft.com/en-us/library/System.Xml.XmlReader_methods(v=vs.110).aspx

NEW QUESTION 301
You are creating a class library that will be used in a web application. You need to ensure that the class library assembly is strongly named. What should you do?

A. Use assembly attributes.
B. Use the csc.exe /target:Library option when building the application.
C. Use the xsd.exe command-line tool.
D. Use the EdmGen.exe command-line tool.

Answer: A

Explanation: The Windows Software Development Kit (SDK) provides several ways to sign an assembly with a strong name:

* (A) Using assembly attributes to insert the strong name information in your code. You can use either the AssemblyKeyFileAttribute or the AssemblyKeyNameAttribute, depending on where the key file to be used is located.
* Using the Assembly Linker (Al.exe) provided by the Windows SDK.
* Using compiler options such /keyfile or /delaysign in C# and Visual Basic, or the /KEYFILE or /DELAYSIGN linker option in C++. (For information on delay signing, see Delay Signing an Assembly.)

NEW QUESTION 303
You are modifying an existing application.
The application includes a Loan class and a Customer class. The following code segment defines the classes.

```
class Loan
{
  public Loan(decimal amount, int term, decimal rate)
  {
    Term = term;
    Amount = amount;
    Rate = rate;
  }
  public decimal Amount { get; set; }
  public decimal Rate { get; set; }
  public int Term { get; set; }
}

class Customer
{
  public Customer(string firstName, string lastName, Collection<Loan> loans)
  {
    FirstName = firstName;
    LastName = lastName;
    LoanCollection = loans;
  }
  public string FirstName { get; set; }
  public string LastName { get; set; }
  public Collection<Loan> LoanCollection { get; set; }
}
```

You populate a collection named customer-Collection with Customer and Loan objects by using the following code segment:

```
Collection<Customer> customerCollection = new Collection<Customer>();
Collection<Loan> customerLoans = new Collection<Loan>();
customerLoans.Add(new Loan(1000m, 2, 0.025m));
customerLoans.Add(new Loan(3000m, 4, 0.045m));
customerLoans.Add(new Loan(5000m, 6, 0.045m));
customerCollection.Add(new Customer("Steve", "Jones", customerLoans));
```

You create a largeCustomerLoans collection to store the Loan objects by using the following code segment:
Collection<Loan> largeCustomerLoans = new Collection<Loan>();
All loans with an Amount value greater than or equal to 4000 must be tracked. You need to populate the largeCustomerLoans collection with Loan objects. Which code segment should you use?

A.
```
foreach (Customer customer in customerCollection)
{
  foreach (Loan loan in customer.LoanCollection)
  {
    if (loan.Amount >= 4000m)
    {
      customer.LoanCollection.Add(loan);
    }
  }
}
```

B.
```
foreach (Loan customer in customerCollection)
{
  foreach (Loan loan in largeCustomerLoans)
  {
    if (loan.Amount >= 4000m)
    {
      largeCustomerLoans.Add(loan);
    }
  }
}
```

C.
```
foreach (Loan loan in largeCustomerLoans)
{
  foreach (Customer customer in customerCollection)
  {
    if (loan.Amount >= 4000m)
    {
      customer.LoanCollection.Add(loan);
    }
  }
}
```

D.
```
foreach (Customer customer in customerCollection)
{
  foreach (Loan loan in customer.LoanCollection)
  {
    if (loan.Amount >= 4000m)
    {
      largeCustomerLoans.Add(loan);
    }
  }
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

Explanation: We must add to the largeCustomerLoans collection, not the customerLoanCollection.
We iterate through each customer in customerCollection and check each loan belonging to this customer.

NEW QUESTION 305
DRAG DROP
You are developing a C# application. The application includes a class named Rate. The following code segment implements the Rate class:

```
public class Rate
{
  public string Category { get; set; }
  public DateTime Date { get; set; }
  public decimal Value { get; set; }
}
```

You define a collection of rates named rateCollection by using the following code segment: Collection<Rate> rateCollection = new Collection<Rate>() ;
The application receives an XML file that contains rate information in the following format:

```
<?xml version="1.0" encoding="utf-8" ?>
<RateSheet>
  <rate category="buyout" date="2012-03-22">
    <value>0.0375</value>
  </rate>
  <rate category="fixed" date="2012-03-23">
    <value>0.0475</value>
  </rate>
</RateSheet>
```

You need to parse the XML file and populate the rateCollection collection with Rate objects. You have the following code:

```
using (XmlReader reader = XmlReader.Create(new StringReader(rateXML)))
{
  Target 1
  {
    Rate rate = new Rate();
    Target 2
    rate.Category = reader.Value;
    Target 3
    DateTime rateDate;
    if (DateTime.TryParse(reader.Value, out rateDate))
    {
      rate.Date = rateDate;
    }
    Target 4
    decimal value;
    if (decimal.TryParse(reader.ReadElementContentAsString(), out value))
    {
      rate.Value = value;
    }
    rateCollection.Add(rate);
  }
}
```

Which code segments should you include in Target 1, Target 2, Target 3 and Target 4 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area.
Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Segments

```
while(reader.ReadToFollowing("RateSheet"))
while(reader.ReadToFollowing("rate"))
reader.MoveToElement();
reader.MoveToFirstAttribute();
reader.MoveToContent();
reader.MoveToNextAttribute();
reader.ReadToFollowing("value");
```

Answer Area

Target 1: Code Segment
Target 2: Code Segment
Target 3: Code Segment
Target 4: Code Segment

Answer:

Explanation: * Target 1: The element name is rate not Ratesheet.
The Xmlreader readToFollowing reads until the named element is found.
* Target 2:
The following example gets the value of the first attribute. reader.ReadToFollowing("book"); reader.MoveToFirstAttribute();
string genre = reader.Value; Console.WriteLine("The genre value: " + genre);
* Target 3, Target 4:
The following example displays all attributes on the current node.
C#VB
if (reader.HasAttributes) {
Console.WriteLine("Attributes of <" + reader.Name + ">"); while (reader.MoveToNextAttribute()) { Console.WriteLine(" {0}={1}", reader.Name, reader.Value);
}
// Move the reader back to the element node. reader.MoveToElement();
}
The XmlReader.MoveToElement method moves to the element that contains the current attribute node.
Reference: XmlReader Methods
https://msdn.microsoft.com/en-us/library/System.Xml.XmlReader_methods(v=vs.110).aspx

NEW QUESTION 306
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