Vendor: Microsoft

Exam Code: 70-483

Exam Name: Microsoft Programming in C#

Questions and Answers No.: 181-190 (231Q&As)

QUESTION 181

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
)
```

QUESTION 182
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 year parameter.

You need to ensure that the application meets the requirements.
Which code segment should you insert at line 08?

A. `where order.OrderDate.Value.Year == year`

B. `where order.OrderDate.HasValue && order.OrderDate.Value.Year == year`

C. `where order.OrderDate.Value != null && order.OrderDate.Value.Year >= year`

D. `where order.OrderDate.Value == null && order.OrderDate.Value.Year == year`

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

Answer: B

QUESTION 183
You are developing an application.
The application contains the following code segment (line numbers are included for reference only):
When you run the code, you receive the following error message:
"Cannot implicitly convert type 'object'' to 'inf. An explicit conversion exists (are you missing a cast?)."
You need to ensure that the code can be compiled.
Which code should you use to replace line 05?

```
01  ArrayList array1 = new ArrayList();
02  int var1 = 10;
03  int var2;
04  array1.Add(var1);
05  var2 = array1[0];
```

A. `var2 = ((List<int>) array1) [0];`
B. `var2 = array1[0].Equals(typeof(int));`
C. `var2 = Convert.ToInt32(array1[0]);`
D. `var2 = ((int[])array1)[0];`

Answer: A
Explanation:
Make a list of integers of the array with = ((List<int>)arrayl) then select the first item in the list with [0].

QUESTION 184
Hotspot Question
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",
    [ 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:

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

[SourceLevels.ActivityTracing ▾]
- 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.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.TraceEvent(TraceEventType.Start, 0, "Start"); ▾]
- 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", originalId); ▾]
- ts.TraceTransfer(1, "Changing Activity", guid);
- ts.TraceTransfer(1, "Changing Activity", originalId);
- ts.TraceInformation("Stop");

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

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

QUESTION 185
You are developing an application for a bank.
The application includes a method named ProcessLoan that processes loan applications.
The ProcessLoan() method uses a method named CalculateInterest.
The application includes the following code:
You need to declare a delegate to support the ProcessLoan() method.
Which code segment should you use?

A.
```
public delegate decimal LoanProcessor(decimal loanAmount, decimal loanRate, int term);
```

B.
```
public delegate int LoanProcessor(decimal loanAmount, decimal loanRate, int term);
```

C.
```
public delegate decimal CalculateLoanInterest(decimal loanAmount, decimal loanRate, int term);
```

D.
```
public delegate decimal ProcessLoan();
```

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

Answer: C

QUESTION 186
You are creating a console application named App1.
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):
You need to ensure that the code validates the JSON string.
Which code should you insert at line 03?

```
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 }
```

A. `DataContractSerializer serializer = new DataContractSerializer();`
B. `var serializer = new DataContractSerializer();`
C. `XmlSerlalizer serializer = new XmlSerlalizer();`
D. `var serializer = new JavaScriptSerializer();`

Answer: D
Explanation:
The JavaScriptSerializer Class Provides serialization and deserialization functionality for AJAX-enabled 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.

QUESTION 187
Drag and Drop Question
You are adding a function to a membership tracking application-
The function uses an integer named memberCode as an input parameter and returns the membership type as a string.
The function must meet the following requirements:
- Return "Non-Member" if the memberCode is 0.
- Return "Member" if the memberCode is 1.
- Return "Invalid" if the memberCode is any value other than 0 or 1.

You need to implement the function 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

```
private string GetMemberType(int memberCode)
{
    string memberType;
    ____(memberCode)
    {
        ____0:
            memberType = "Non-Member";
            ____;
        ____1:
            memberType = "Member";
            ____;
        ____:
            memberType = "Invalid";
            ____;
    }
    return memberType;
}
```

Answer:

default
switch
break
case

```
private string GetMemberType(int memberCode)
{
    string memberType;
    switch (memberCode)
    {
        case 0:
            memberType = "Non-Member";
            break;
        case 1:
            memberType = "Member";
            break;
        default:
            memberType = "Invalid";
            break;
    }
    return memberType;
}
```

QUESTION 188
You are developing an application that contains a class named TheaterCustomer and a method named ProcessTheaterCustomer.
The ProcessTheaterCustomer() method accepts a TheaterCustomer object as the input parameter.
You have the following requirements:
- Store the TheaterCustomer objects in a collection.
- Ensure that the ProcessTheaterCustomer() method processes the TheaterCustomer objects in the order in which they are placed into the collection.
You need to meet the requirements.
What should you do?

A. Create a System.Collections.Stack collection.
Use the Push() method to add TheaterCustomer objects to the collection.
Use the Peek() method to pass the objects to the ProcessTheaterCustomer() method.
B. Create a System.Collections.Queue collection.
Use the Enqueue() method to add TheaterCustomer objects to the collection.
Use the Dequeue() method to pass the objects to the ProcessTheaterCustomer() method.
C. Create a System.Collections.SortedList collection.
Use the Add() method to add TheaterCustomer objects to the collection.
Use the Remove() method to pass the objects to the ProcessTheaterCustomer() method.
D. Create a System.Collections.ArrayList collection.
Use the Insert() method to add TheaterCustomer objects to the collection.
Use the Remove() method to pass the objects to the ProcessTheaterCustomer() method.

Answer: B

QUESTION 189

You are developing an application that includes the following code segment:

```
interface IHome
{
  void Start();
}
interface IOffice
{
  void Start();
}
```

You need to implement both Start() methods in a derived class named UseStart that uses the Start() method of each interface.
Which two code segments should you use? (Each correct answer presents part of the solution. Choose two.)

A.
```
var starter = new UseStart();
((IHome, IOffice)starter).Start();
```

B.
```
class UseStart : IHome, IOffice
{
  public void IHome.Start()
  {
    ...
  }
  public void IOffice.Start()
  {
    ...
  }
}
```

C.
```
class UseStart : IHome, IOffice
{
  void IHome.Start()
  {
    ...
  }
  void IOffice.Start()
  {
    ...
  }
}
```

D.
```
var starter = new UseStart();
((IHome)starter).Start();
((IOffice)starter).Start();
```

E.
```
var starter = new UseStart();
starter.Start(IHome);
starter.Start(IOffice);
```

F.
```
var starter = new UseStart();
starter.Start();
```

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

D. Option D
E. Option E
F. Option F

Answer: BE
Explanation:
B:
- Implementing Multiple Interfaces
A class can implement multiple interfaces using the following syntax:
C#
public class CDAndDVDComboPlayer : ICDPlayer, IDVDPlayer
If a class implements more than one interface where there is ambiguity in the names of members, it is resolved using the full qualifier for the property or method name. In other words, the derived class can resolve the conflict by using the fully qualified name for the method to indicate to which interface it belongs
- In C#, both inheritance and interface implementation are defined by the : operator, equivalent to extends and implements in Java. The base class should always be leftmost in the class declaration.

QUESTION 190
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: C
Explanation:
DbDataReader Class
Reads a forward-only stream of rows from a data source.