



**70-548 (C++)**

**NCDS-Multiservice Switch 7400/15000/20000**

Q&A

DEMO Version

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**QUESTION 1**

You create Microsoft Windows-based applications. You are creating a component that will encapsulate a data source. Dozens of applications will use the component.

The component must meet the following design requirements:

1. The component must be able to be modified within a Rapid Application Development environment.
2. The component must be without a user interface.

You propose to derive the component from the System.Windows.Forms.Control class and to implement the IComponent interface. You need to decide whether the component will meet the requirements. What should you conclude?

- A. The solution meets both the design requirements.
- B. The solution does not meet any of the design requirements.
- C. The solution meets the second requirement but not the first requirement.
- D. The solution meets the first requirement but not the second requirement.

**Answer: D**

**QUESTION 2**

You create Microsoft Windows-based applications. You are designing a component that will draw a series of graphics based on an interactive user input. You need to ensure that the user can use the input without waiting for the graphics to be drawn. What should you do?

- A. Design the component as a single-threaded component.
- B. Design the component as a single-threaded apartment component.
- C. Design the component as a multi-threaded component that has a thread for user input and a thread for graphics. Grant the user input thread a higher priority than the graphics thread.
- D. Design the component as a multi-threaded component that has a thread for user input and a thread for graphics. Grant the user input thread a lower priority than the graphics thread.

**Answer: C**

**QUESTION 3**

You create Microsoft Windows-based applications. You are responsible for maintaining your company's application framework. You analyze the requirements for some of the applications that your company develops. You identify a common functionality. The functionality includes user interface elements as well as data-binding logic and display logic. You need to implement the functionality in such a way that other applications can reuse it. Which type of component should you implement?

- A. data access component
- B. business logic component
- C. control library
- D. data structure component

**Answer: C**

**QUESTION 4**

You create Microsoft Windows-based applications.

You are designing a class to be used by multiple client applications. This class will be used to generate unique account numbers. Your company guidelines state that unique number generating components must comply with the following design pattern:

Classes must be designed so that they cannot be instantiated directly by client applications. Only a single instance of the class must be used by all the client applications. Instance methods and properties for these classes must be accessible to client applications.

You need to define how this class will implement the design pattern. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Declare the class constructors as private.
- B. Declare the class constructors as internal.
- C. Create a public static method to retrieve an existing instance of the class, or a new instance if one does not exist.
- D. Create a public instance method to retrieve an existing instance of the class, or a new instance if one does not exist.
- E. Create a private static method to retrieve an existing instance of the class, or a new instance if one does not exist.

**Answer: BC**

#### QUESTION 5

You create Microsoft Windows-based applications. You create a component to process daily reports. These daily reports are data-driven.

Eight database tables dictate the following properties:

the data that is printed  
 the format of the data  
 the order of output

The component loads the configuration data into a specific internal structure. Subsequently, the component retrieves and outputs the report data based on the configuration settings that are stored in the internal structure. The database is not updated. You need to develop the data handling capabilities of the component to manage the configuration data and the report data. You also need to ensure that the reports are generated as quickly as possible. Which two data handling mechanisms should you choose? (Each correct answer presents part of the solution. Choose two.)

- A. Use a DataReader object to load the report data based on the configuration data. Perform the required calculations.
- B. Use a DataReader object to load the configuration data from the database.
- C. Use a DataAdapter object and a DataSet object to load the configuration data from the database.
- D. Use a DataAdapter object and a DataSet object to load the report data based on the configuration data. Perform the required calculations.

**Answer: AB**

#### QUESTION 6

You create Microsoft Windows-based applications. You create a component that calls an existing function. The design for the function specifies that it might throw an application-specific exception named InvalidChecksumException, which inherits from System.ApplicationException. The InvalidChecksumException exception is an error that can be handled. But the component cannot handle any other type of error. The

component does not have any additional information that can be added to other types of errors. You need to design the component to correctly handle exceptions. You also need to ensure that the exception-handling strategy does not affect performance. What should you do?

- A. Use a catch statement that has a filter for ApplicationExceptions and find the exception type. If it is InvalidChecksumException, handle it automatically or rethrow the exception.
- B. Use only a catch statement that has a filter for InvalidChecksumExceptions and handle them automatically.
- C. Use a catch statement that has an empty filter. Verify the Message property to see if the exception is an InvalidChecksumException and perform the automatic recovery or rethrow the exception.
- D. Use a catch statement that has a filter for InvalidChecksumException, followed by another catch statement that has a filter for Exception. In the first catch block, automatically handle the exception. In the second catch block, log the error and rethrow the exception.

**Answer: B**

### QUESTION 7

You create Microsoft Windows-based applications. You are creating a component. The component performs statistical computations by using sets of data from a large, complex database. According to the design specification, the component performs a full set of calculations in not more than 5 seconds. Currently, the component takes more than 20 seconds to perform the required calculations. The project is almost complete and you must resolve the performance issues quickly. You need to identify the major processing performance issues in the component. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Add custom instrumentation to the component for operations that you expect will exceed performance requirements.
- B. Use SQL Profiler when you run the component to identify long-running database queries.
- C. Use Microsoft Network Monitor to identify long-running or large network data transfers.
- D. Use the common language runtime (CLR) profiler to identify the most used and long-running functions in the component and the specific external functions they call.
- E. Create a custom test harness that calls individual functions and measures how long they take to run.

**Answer: BD**

### QUESTION 8

You create Microsoft Windows-based applications. You create a component that is used by 10 Windows-based applications. The component contains classes that represent persons. The three main classes are named Customer, Contractor, and Employee. These three classes serve as base classes for other classes. All classes have similar properties. The properties are implemented in a base abstract class called Person. The Customer, Contractor, and Employee classes can be instantiated. The following table describes what each method does in these classes.

Methods are included and implemented as high up in the hierarchy as possible. You need to define the appropriate method to be implemented in the appropriate base class. What should you do? To answer, drag the appropriate methods to the correct class or classes in the answer area.

Method	Customer	Contractor	Employee
Save	Saves properties in a database	Saves properties in a database	Saves properties in a database
Retrieve	Populates object based on data from a database	Populates object based on data from a database	Populates object based on data from a database
Pay	Not implemented	Calculates contractor pay based on hourly rate	Calculates employee pay based on annual salary
PlaceOrder	Creates a sales order for the customer	Creates a sales order as sold by the contractor	Creates a sales order as sold by the employee

Methods	Answer Area			
	Person	Customer	Contractor	Employee
virtual Save	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
virtual Retrieve	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
virtual Pay	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
virtual PlaceOrder	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
abstract PlaceOrder	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

- A.
- B.
- C.
- D.

**Answer:**

### QUESTION 9

You create Microsoft Windows-based applications. You are developing an application that will be used by stock traders. The project scope contains the following requirements:

The application must permit users to set thresholds for minimum and maximum values for different stocks.  
 The application must alert the user when stock prices reach the pre-defined thresholds. The application must permit the user to either buy or sell stock and specify the quantity of stock to trade.  
 The application must permit multiple alerts to be displayed simultaneously.

You need to decide how to implement the alert mechanism. What should you do?

- A. Use a modal dialog box to show each alert and to permit the user to trade stocks.
- B. Use a message box to show each alert and the main application form to permit the user to trade stocks.
- C. Use a BalloonTip control to display multiple alerts and the main application form to permit the user to trade stocks.
- D. Use a custom BalloonTip control to display multiple alerts and to permit the user to trade stocks.

**Answer:** D

### QUESTION 10

You create Microsoft Windows-based applications. You are designing an application that streams multimedia

data. The application must have minimal impact on the network. The application will be used by Microsoft Windows XP Professional client computers and Microsoft Windows Server 2003 client computers. The media you need to use is stored on a file server in a nonproprietary raw video format and the files are unedited. You need to choose an appropriate design modification that requires the least amount of programming effort. What should you do?

- A. Write code to convert the video files to Microsoft Windows Media Video (WMV) format in real time.
- B. Convert the video files to Microsoft Windows Media Video (WMV) format, and resample the video to a bit rate that is acceptable.
- C. Write a custom file format filter for Microsoft DirectShow, and distribute the filter to the client computers.
- D. Convert the video files into separate audio and video files.

**Answer: B**