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# **Q&A**

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**Exam** : **070-549 ( VB )**

**Title** : PRO:Design & Develop Enterprise  
Appl by Using MS.NET Frmwk  
VB

**Version** : DEMO

1. You are an enterprise application developer. You are implementing a new component for an application. The component accesses a database to populate a list of customer objects and exposes a method that is named GetAllCustomers.

The component uses a design pattern to access the database only on an as-needed basis. A caching mechanism exists in a lower tier of the application architecture. The component must not cache data.

You need to implement the logic for populating a list of customer objects by using a database query. You also need to ensure that you meet the company guidelines for the component design pattern.

What should you do?

- A. Execute a query in the constructor of the component to populate a field of type List(Of Customer). Return the List reference in the call to the GetAllCustomers method.
- B. Execute a query in the static constructor of the component to populate a static field of type List(Of Customer). Return the List reference in the call to the GetAllCustomers method.
- C. Execute a query in the GetAllCustomers method to populate a local variable of type List(Of Customer). Return the List reference.
- D. Execute a query in the GetAllCustomers method to populate a field of type List(Of Customer) only if the field is null. Return the List reference.

Answer: C

2. You are an enterprise application developer. You create a component that exposes a Shared method. The Shared method performs a complex business algorithm and the method must support concurrent callers. You use asynchronous processing to implement the method.

You need to ensure that the client application is notified about the completion of the method.

What should you do?

- A. Add a Public Shared Event to the component and raise the event when processing is complete.
- B. Pass a callback Delegate from the client application as a parameter to the processing method. Invoke the Delegate when processing is complete.
- C. Add a Public Shared Property to the component and permit the client application to poll the component for completion.
- D. Add a constructor that accepts a callback Delegate as parameter from the client application. Invoke the Delegate when processing is complete.

Answer: B

3. You are an enterprise application developer. You are creating a component that will be deployed as part of a class library. The component must meet the following specifications:

The interface of the component must be accessible to components outside the hosting assembly.

The interface of the component must be interoperable with components written in any other .NET Framework languages.

The implementation of the component cannot be expanded upon by a derived class.

You need to design the interface of the component.

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

A. Apply the CLSCompliant(True) attribute to the assembly and component definition.

B. Apply the MustInherit keyword to the component definition.

C. Apply the ComVisible(True) attribute to the assembly and component definition.

D. Create a primary interop assembly for the assembly that hosts your component.

E. Apply the NotInheritable keyword to the component definition.

F. Apply the Public keyword to the component definition.

Answer: A AND E AND F

4. You are an enterprise application developer for Woodgrove Bank. You are creating an application to manage different loan types.

All loan types share a common implementation for interacting with the financial systems of Woodgrove.

Each loan type must implement its own rules for calculating interest. In the first version of the application, you must support car loans and house loans.

You need to develop an architecture for the different loan types within your application.

What should you do?

A. Implement Loan as a MustInherit class. Implement CarLoan and HouseLoan as concrete classes.

B. Implement Loan as an interface. Implement CarLoan and HouseLoan as concrete classes.

C. Implement Loan as a concrete class. Implement CarLoan and HouseLoan as interfaces.

D. Implement Loan as a NotInheritable class. Implement CarLoan and HouseLoan as abstract classes.

Answer: A

5. You are an enterprise application developer. You are creating a component that processes loan requests. Your component will be used inside Microsoft Windows Forms client applications.

The loan request form is complex and time consuming to complete. Loan data is saved to a Microsoft SQL Server 2005 database.

You need to ensure that in case of a system failure the loan officer does not need to re-enter any loan data.

What should you do?

A. Implement a Private Save method that saves all Property values to the database. Call the Save method from inside your components finalizer.

B. Implement code inside the Set accessor for each Property that saves the Property value to the database.

C. Implement a Public Save method that saves all Property values to a Shared variable.

D. Implement code inside the Set accessor that saves the Property value to a Shared variable.

Answer: B

6. You are an enterprise application developer. You are creating a component to process geospatial data.

The component retrieves large sets of data from a Microsoft SQL Server database. Each data point consists of two decimal values: one value represents longitude and the other value represents latitude.

You need to design a data format that minimizes the managed heap memory allocation needed for each data point within the component.

What should you do?

A. Design a custom class that contains Private fields for the longitude and the latitude, and design read-only Public properties for the longitude and the latitude.

B. Design an XML element that contains an attribute for each longitude value and each latitude value.

C. Design an ADO.NET DataRow class that contains DataColumnns for the longitude and latitude values.

D. Design a custom Structure that contains a Public field for the longitude value and a Public field for the latitude value.

Answer: D

7. You are an enterprise application developer. You create a Microsoft Windows client application that communicates with a business layer component.

The business layer component contains the following class, named Utility.

```
Public Class Utility
    Public Sub New()
        ...
    End Sub
    Public Sub ChangeData()
        ...
    End Sub
End Class
```

The application must fulfill the following criteria:

Instances of the Utility class must be created only within the business component.

The Windows client application must be able to invoke the methods inside the Utility class.

You review the code for the Utility class and decide it requires modification.

You need to recommend modifications for the code.

What should you recommend?

- A. Change the scope of the constructor to Private.
- B. Change the scope of the constructor to Friend.
- C. Change the scope of the Utility class to Private.
- D. Change the scope of the Utility class to Friend.

Answer: B

8. You are an enterprise application developer. You create a data access layer for an order processing application.

The data access layer meets the following criteria:

The data access layer contains a GetConnectionString method to retrieve and return the connection string for the database.

The data access layer contains a stored procedure named GetTotalOrderAmount.

The stored procedure runs a select query to return only the sum of the OrderAmount column for the active orders. At times, there might be no active orders.

You create the following method to execute the stored procedure and return the total.

```
Public Function GetTotalOrderAmount() As Double
    Dim con As New SqlConnection(GetConnectionString())
    Dim sql As String = "GetTotalOrderAmount"
    Dim cmd As New SqlCommand(sql, con)
    Dim rd As IDataReader = cmd.ExecuteReader()
    Dim amt As Double = 0.0
    If rd.Read() Then
        amt = rd.GetDouble(0)
    End If
    rd.Close()
    con.Close()
    Return amt
End Function
```

You need to review the code and recommend modifications to simplify the code and improve performance, if necessary.

What should you conclude and recommend?

- A. The code does not need to be modified.
- B. The code needs to be modified. You must remove the condition that verifies whether the DataReader object returned any rows.
- C. The code needs to be modified. You must use a DataSet object instead of a DataReader object.
- D. The code needs to be modified. You must use the ExecuteScalar method instead of the ExecuteReader method.

Answer: D

9. You are an enterprise application developer. You are performing a peer code review for an entry-level developer. The developer is implementing server-side business objects.

The business objects must be accessed and activated by using .NET Framework remoting. In addition,

the business objects must meet the following requirements:

Implement an interface for client-side access.

Inherit from a base business object class.

The developer writes the following code segment.

```
Public Class UserObject
    Inherits BaseBizObject, MarshalByRefObject
    Implements IUserObject
End Class
```

When the developer attempts to compile the code, an error message is received.

You need to review the code and recommend a solution.

What should you recommend?

- A. The class must derive from the MarshalByRefObject class. The UserObject class can access methods in the BaseBizObject class by creating an instance of the BaseBizObject class.
- B. The class must derive from the BaseBizObject class. The BaseBizObject class must derive from the MarshalByRefObject class.
- C. Change the approach so that the client computer accesses a wrapper class that derives from the MarshalByRefObject class.
- D. The class must derive from the MarshalByValue class instead of the MarshalByRefObject class.

Answer: B

10. You are an enterprise application developer. You are manipulating a collection of customer, product, and supplier objects.

The collection objects must fulfill the following requirements:

The objects must use custom sort methods on different properties of the respective classes.

The objects must be strongly typed.

A developer from your team decides to use the following collection classes.

```
Public MustInherit Class MyCollectionBase
    Inherits System.Collections.CollectionBase
    Public MustOverride Sub Sort()
End Class
```

```
Public Class CustomerCollection
```

```
    Inherits MyCollectionBase
```

```
    'Code overriding CollectionBase methods
```

```
    Public Overrides Sub Sort()
```

```
        'Customer sorting method
```

```
    End Sub
```

```
End Class
```

```
Public Class SupplierCollection
```

```
    Inherits MyCollectionBase
```

```
    'Code overriding CollectionBase methods
```

```
    Public Overrides Sub Sort()
```

```
        'Supplier sorting method
```

```
    End Sub
```

```
End Class
```

```
Public Class ProductCollection
```

```
    Inherits MyCollectionBase
```

```
    'Code overriding CollectionBase methods
```

```
    Public Overrides Sub Sort()
```

```
        'Product sorting method
```

```
    End Sub
```

```
End Class
```

You need to review the code and recommend improvements to simplify maintenance, if necessary.

What should you conclude and recommend?

- A. The code does not need to be modified.
- B. The code needs to be modified. The MyCollectionBase class must implement the ICollection interface instead of inheriting from the CollectionBase class.
- C. The code needs to be modified. Use List(Of T) class instead of creating custom collections.
- D. The code needs to be modified. The child collection classes must inherit from the CollectionBase class instead of the MyCollectionBase class.

Answer: C

11. You are an enterprise application developer. You are creating a client/server application. You need to install the application on the company network.

The client/server application must meet the following criteria:

The server component is a class library that is created by using the .NET Framework.

The client component is a Microsoft Windows-based application that is created by using the .NET Framework.

The client component and the server component must communicate by using a binary protocol.

The fewest possible ports are opened between the client component and the server component.

You need to identify a technology that permits the server to communicate with the client component through the TCP/IP protocol.

Which technology should you use?

- A. Message Queuing
- B. .NET Remoting
- C. Web services
- D. DCOM

Answer: B

12. You are an enterprise application developer. You are creating an application that will track shipments.

This application must support integration with applications that run on different platforms and operating systems. The application that you are creating can be invoked only through SOAP messages over HTTP.

You choose Web services instead of .NET Remoting to meet these requirements.

You need to specify the reason for choosing Web services.

Which statement should influence your decision?

- A. SOAP messages cannot be exchanged in .NET Remoting.
- B. Web Services Description Language documents cannot be generated from .NET Remoting class definitions.
- C. .NET Remoting objects will not be interoperable with other platforms.
- D. .NET Remoting objects cannot be invoked through HTTP.

Answer: C

13. You are an enterprise application developer. You are creating an application for the sales department. Users in the sales department are occasionally connected to the network. Users enter orders through a smart client interface. The orders are sent to a business component that is installed on an application server. The business component updates the orders.

You need to ensure that the orders are reliably delivered to the server.

Which technology should you choose?

- A. .NET Remoting
- B. Web services
- C. Message Queuing
- D. DCOM

Answer: C

14. You are an enterprise application developer. You are creating an application. Within your application, an order contains order lines. Order lines are always contained within an order.

You need to analyze this structure and show the link between the order and the order line by using a class diagram.

Which diagram should you choose?

A.



B.



C.



D.



Answer: A

15. You are an enterprise application developer. You are creating an application. The application uses different database products for different customers.

You need to ensure maximum reuse of the code that is available in the different layers of the application.

You also need to ensure that the application uses the unique features of each database product.

Which layer should you create for each database product?

- A. Business layer
- B. Data access layer
- C. Business process layer
- D. Service layer

Answer: B

16. You are an enterprise application developer. You create an order processing application.

The application must meet the following requirements:

The order is scheduled for delivery if all products are available.

The order is back-ordered if any one product is not available.

The customer can cancel the back-ordered order.

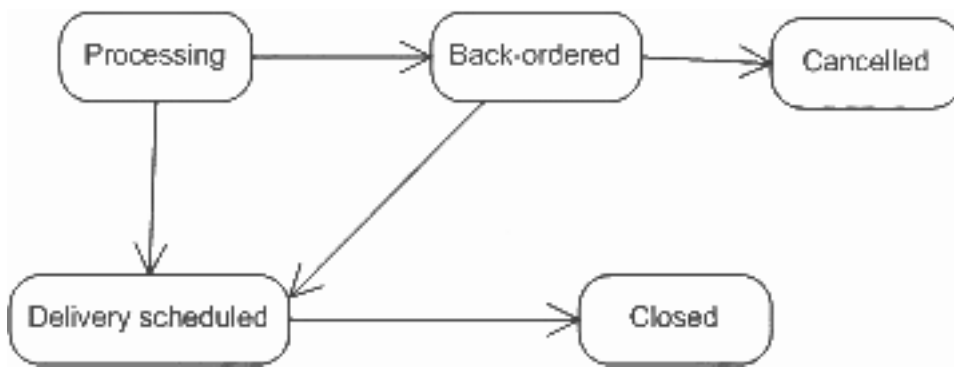
The order is scheduled for delivery if the customer does not cancel it.

The order is closed after delivery.

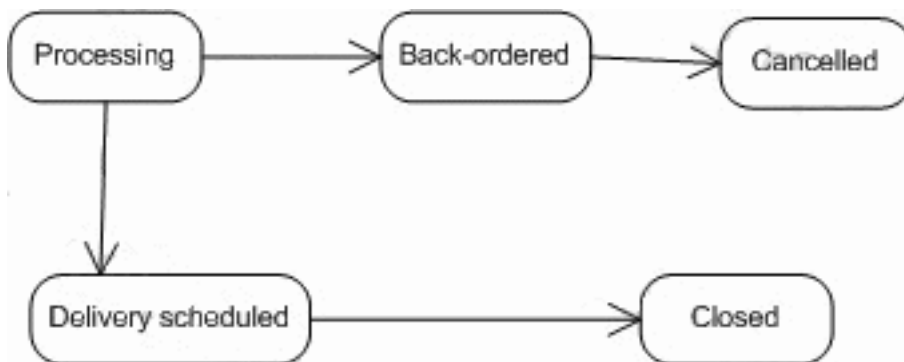
You need to select the state diagram that translates the requirements.

Which diagram should you choose?

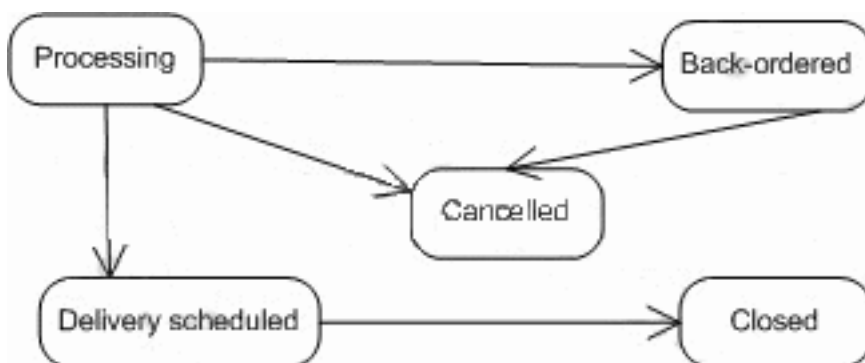
- A.



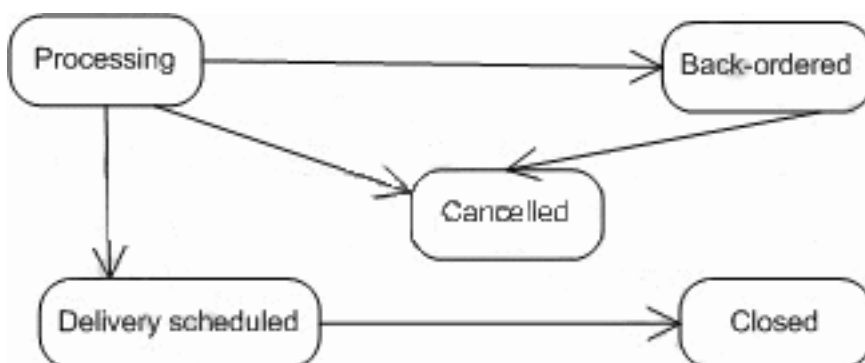
B.



C.



D.



Answer: A

17. You are an enterprise application developer. You create an application that has three layers:

Layer 1 contains the Microsoft Windows client and the input validation logic.

Layer 2 contains business entities, business workflows, and business rules.

Layer 3 contains the data access classes and stored procedures.

You need to analyze the layers and identify dependencies that exist between these layers.

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

- A. Layer 1 depends on Layer 2.
- B. Layer 3 depends on Layer 1.
- C. Layer 2 depends on Layer 3.
- D. Layer 1 depends on Layer 3.
- E. Layer 2 depends on Layer 1.

Answer: A AND C

18. You are an enterprise application developer. You are creating a human resource application.

You identify the following relationships between the business objects:

A manager is an employee.

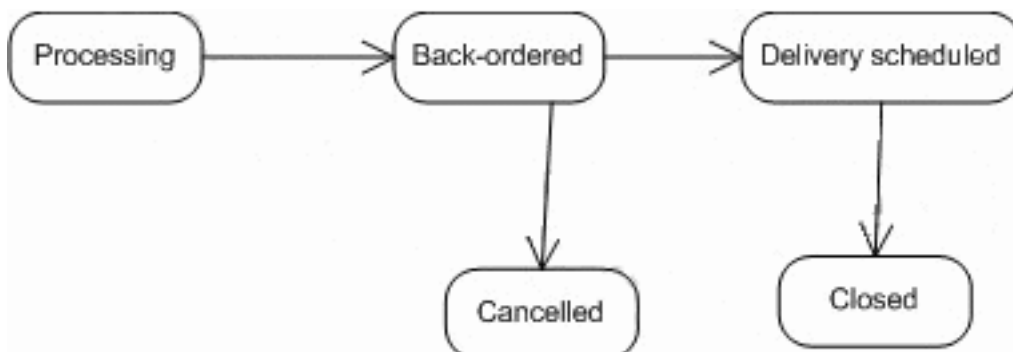
An executive is an employee.

An employee works for a company.

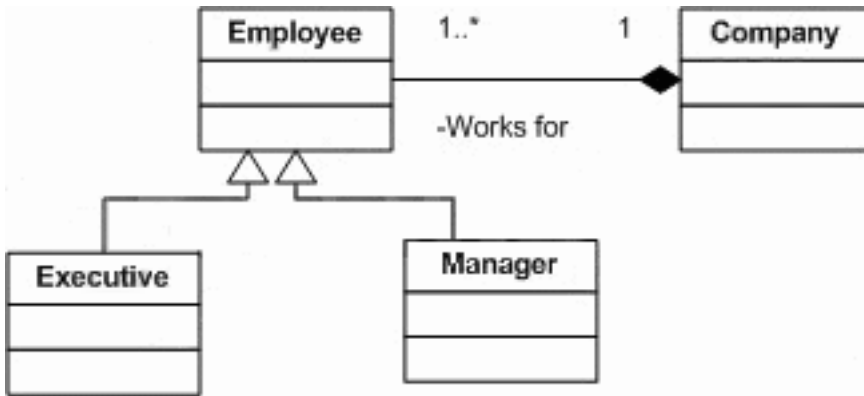
You need to translate only these relationships into a class diagram.

Which diagram should you choose?

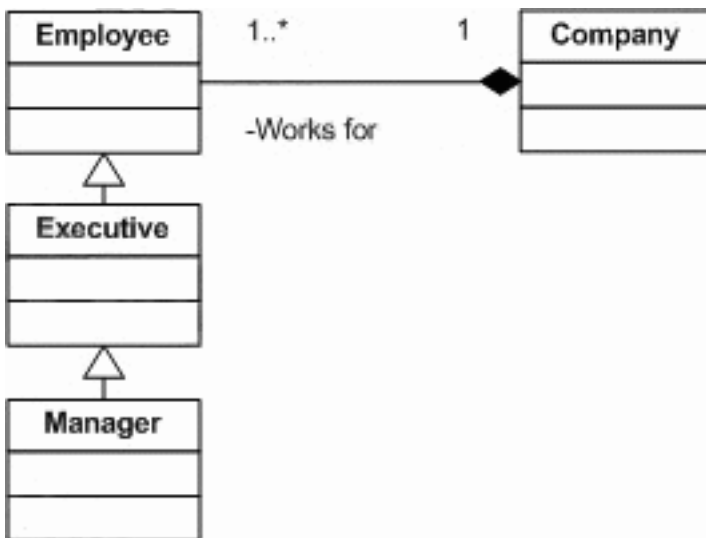
A.



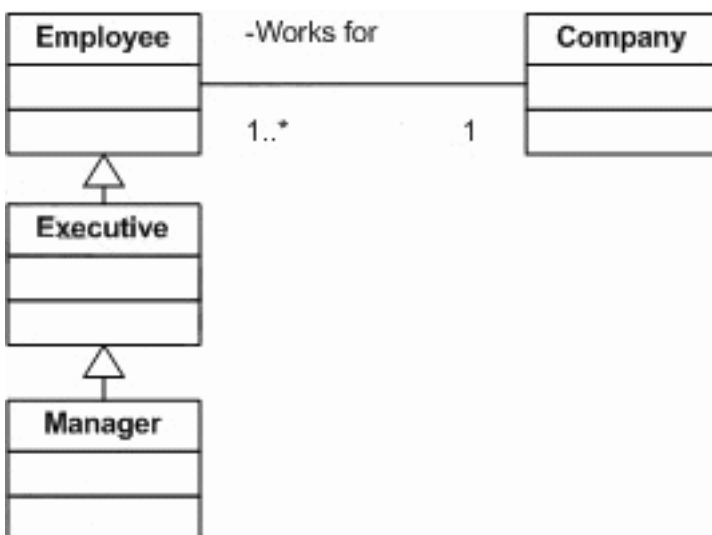
B.



C.



D.



Answer: B

19. You are an enterprise application developer. You are designing an application. The database for the application currently has a one-to-one relationship between order and product.

The application must meet the following business requirements:

An order must contain orders for many products.

An order must store the ordered quantity of each product.

You need to evaluate the existing design and recommend changes to meet the business requirements.

Which two changes should you recommend? (Each correct answer presents a complete solution. Choose two.)

A. Change the relationship between order and product to one-to-many.

B. Change the relationship between order and product to many-to-many.

C. Create a new table named Order line. Establish a one-to-many relationship between order and Order line and a one-to-one relationship between product and Order line.

D. Create a new table named Order line. Establish a one-to-many relationship between order and Order line and a one-to-many relationship between product and Order line.

Answer: B AND D

20. You are an enterprise application developer. You are evaluating a database design for a human resource application. The existing database schema meets the following criteria:

The database has an Employee table.

The Employee table has an Employee ID field and several other fields.

You must accommodate the following new requirements:

Employees are either supervisors or line workers.

A supervisor will supervise zero or more line workers.

An employee will be supervised by only one supervisor.

A database administrator suggests creating a table named Supervisor and copying the supervisor data from the Employee table to the new table. The database administrator also wants to create a foreign key in the Supervisor table to reference the Employee table.

You need to evaluate the suggested change to ensure that there is minimal impact on the existing database schema.

What should you conclude?

A. The suggested schema change will meet the requirements.

B. The suggested schema change will not meet the requirements. Recommend creating a table named

Supervisor and copying the supervisor data from the Employee table to the new table. Create a foreign key in the Employee table to reference the Supervisor table.

C. The suggested schema change will not meet the requirements. Recommend creating a column named SupervisorID in the Employee table to reference the supervisor for an employee. Create a foreign key between this column and the Employee table.

D. The suggested schema change will not meet the requirements. Recommend creating a column named LineWorkerID in the Employee table to reference the line worker for a supervisor. Create a foreign key between this column and the Employee table.

Answer: C