

# Microsoft

## Exam 70-519

**Pro: Designing and Developing Web Applications Using Microsoft  
.NET Framework 4**

Version: 37.0

**[ Total Questions: 288 ]**

## Topic 4, VB Adventure Works

### BACKGROUND

Adventure Works is a retail operation with facilities in English-speaking and Spanish-speaking countries.

Adventure Works plans to begin selling its products online. As a first step, the company will develop a customer-facing shopping cart.

You are a senior developer hired by the company to lead the development of the new solution.

### BUSINESS REQUIREMENTS

Your solution must meet the following business requirements. General

The Web application must support the English and Spanish languages, and must display all information in the end user's language and culture.

The Web application must handle errors gracefully. If an error occurs, the Web application must send a notification.

### User Interface

The Web application must support two groups of users: customers and administrators. The Web application must have a separate interface for each user group.

The customer-facing interface has the following associated requirements:

- ✍ Customers must create user accounts.
- ✍ The customer-facing interface must include the online store and a page that displays shopping cart content.
- ✍ Customers must submit orders from the shopping cart page.
- ✍ Customers must log in to user accounts to submit orders.
- ✍ Customers must be able to upload image files to the Web application.
- ✍ The online store must include products that can be customized with the image files uploaded by the customer, The administrative interface has the following associated requirements:
  - ✍ The administrative interface must include tools for managing inventory, users, and sales, and tools for viewing reports.
  - ✍ Administrators must be able to change the appearance of the Web application for specific holidays without redeploying the application.

### TECHNICAL REQUIREMENTS

Your solution must meet the following technical requirements.

#### Hardware

You must use only your existing hardware, which consists of three servers that run Windows Server 2008 R2.

The web application must be load balanced among the three servers.

**Development Environment**

The Web application must be developed by using Microsoft Visual Studio 2010 and ASP.NET 4.

Debugging of server-side and client-side code must be performed by using Visual Studio 2010.

A staging server will be used to validate all changes before deploying to production.

**General**

All solutions must be scalable.

All solutions must minimize bandwidth usage.

Techniques used for implementation must result in a codebase that is easy to maintain.

The application pool must be configured to run using the Network Service account.

Session state must be persisted between server farm restarts.

Changes that administrators make to the application's appearance must affect all images and styles across the entire application.

**Security**

The Web application must authenticate users by using Forms authentication.

The least-privileged NTFS permission level must be applied to the file system.

**Coding**

Server-side code and client-side code generated by developers must not be mixed.

Error handling must be managed at a global level.

All data must be represented as entity objects in a separate class library that will be available for future projects.

The shopping cart content page must be developed by using a GridView control.

You have the following requirements for the use of classes:

- ✍ Secured pages must inherit the CustomPage class.
- ✍ The CustomPage class must inherit from the Page class.
- ✍ The administration pages must inherit the CustomManagementPage class.
- ✍ The CustomManagementPage class must be derived from the CustomPage class.

**File Storage**

Certain types of files must be stored in specific folders on the web application server:

- ✍ Store all pages requiring authentication in a folder named Secured.
- ✍ Store all images uploaded by customers in a folder named Upload.

**Question No : 1 - (Topic 4)**

You need to design a solution for implementing holiday-specific site changes.

Which approach should you recommend?

- A. Create a single master page, and change its images and styles dynamically in the code-behind file.
- B. Create one master page for each holiday. In each master page, reference the styles and images for the specific holiday.
- C. For each holiday, create a theme that contains the related images and styles. Include a skin file, and reference the images within the master page with a SkinID.
- D. For each holiday, create a theme that contains the related images and styles. Include a skin file, and reference all images within the web application with a SkinID.




**Answer: D**

### Topic 3, C# Mixed Questions

#### Question No : 2 - (Topic 3)

You are designing an ASP.NET MVC 2 Web application. The Web application will display information from remote third-party Windows Communication Foundation (WCF) services on each page.

You have the following requirements:

-  Retrieve information from the WCF services.
-  Specify a timeout period while retrieving information from third-party services.
-  Cache responses from the third-party services for retrieval by multiple users.

You need to recommend an approach for retrieving information from the WCF service.

What should you recommend?

- A. Use an asynchronous method.
- B. Implement the IHttpAsyncHandler interface on the models for the views.
- C. Implement the IAsyncResult interface on the models for the views.
- D. Use AJAX to asynchronously call the third-party services and display information.

**Answer: A**

#### Question No : 3 - (Topic 3)

You are reviewing an ASP.NET Web application that uses dynamic SQL. The Web application validates user credentials against a Microsoft SQL Server 2008 database by

using Forms authentication and hashing the password.

You need to recommend an approach for testing whether users can gain elevated access to the Web application.

What should you recommend?

- A. Perform SQL injection tests
- B. Perform penetration tests for cross-site scripting
- C. Perform Web tests that supply valid and invalid passwords
- D. Perform unit tests that supply valid and invalid passwords

**Answer: A**

### Topic 6, VB Mixed Questions

#### Question No : 4 - (Topic 6)

You are designing a data access strategy for an ASP.NET Web application.

You plan to expose an existing data source by using WCF Data Services.

You need to recommend an approach to ensure that CRUD operations are possible.

What should you recommend?

- A. Implement the IQueryable and IUpdatable interfaces on data source entities.
- B. Implement the IEnumerable and IEditableObject interfaces on data source entities.
- C. Implement the ILookup and IUpdatable interfaces on data source entities.
- D. Implement the IContainer and IEditableObject interfaces on data source entities.

**Answer: A**

#### Question No : 5 - (Topic 3)

You are designing an ASP.NET Web application.

You have the following requirements:

- ✍ Relational database tables must automatically map to .NET classes.
- ✍ The data access layer must be able to target database engines other than Microsoft SQL Server.

You need to recommend a data access technology.

Which technology should you recommend?

- A. direct ADO.NET calls
- B. Entity Framework 4
- C. LINQ to SQL
- D. .NET Framework Data Provider for OLE DB

**Answer: B**

**Question No : 6 - (Topic 3)**

You have an ASP.NET Web application that displays charts that are generated daily from data in a Microsoft SQL Server database.

Each chart is implemented as a user control that displays data retrieved from the database. Data retrieval and chart generation consume a significant amount of resources.

Users of the Web application generate unique reports that contain one or more chart controls.

Each chart is common to many reports.

You need design a solution to improve the performance of the Web server.

Which approach should you recommend?

- A. Use page caching.
- B. Use fragment caching.
- C. Use the application cache.
- D. Use SQL cache dependency.

**Answer: B**

**Question No : 7 - (Topic 3)**

You are designing an ASP.NET Web application in Microsoft Visual Studio 2010. You plan to deploy the application to multiple branch offices within your company. Each branch office requires different settings for SQL Server connections.

You need to centrally manage the automatic configuration for each branch deployment.

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

- A. Store the connection strings in the database.
- B. Use MSDeploy.
- C. Use a separate web.config file for each branch office.
- D. Use configuration transformations.

**Answer: B,D**

**Question No : 8 - (Topic 3)**

You are designing an ASP.NET Web Forms application that uses a database containing user names and hashed passwords for authentication.

The Web application includes a login form in which users type their user names and passwords.

You need to design a strategy to ensure that the user's login credentials cannot be stolen through a man-in-the-middle attack.

Which approach should you recommend?

- A. Install a certificate on the Web server, and force the login form to use SSL.
- B. Write an on Submit JavaScript handler that hashes the password before the password is submitted to the server.
- C. Write an On Click method for the Submit button that hashes the password before the password is compared with the password value that is stored in the database.
- D. Write an on Submit JavaScript handler that URL-encodes the password before the password is passed to the server.

Answer: A

**Question No : 9 - (Topic 6)**

You are designing a monitoring plan for a multi-tier ASP.NET Web application. The Web application uses multiple Web servers and a database server. You plan to use a dedicated monitoring server.

You need to send an alert when any application server stops responding.

Which approach should you recommend?



- A.** Run a process on the monitoring server that periodically sends a request to each application service. Send an alert if a response is not received for any request.
- B.** Run a process on each Web server that logs activity to a database on the monitoring server. Run a process on the monitoring server that periodically checks the monitoring database and sends an alert if any service stops logging.
- C.** Use AJAX to log user actions on each Web page to a database on the monitoring server. Run a process on the monitoring server that periodically checks the monitoring database and sends an alert if there is an interruption in Web page activity.
- D.** Use Microsoft Message Queuing (MSMQ) to send a message to the monitoring server in the Load event of the Web application's master page. Run a process on the monitoring server that polls for MSMQ messages and sends an alert if any server stops sending messages.

Answer: A

**Question No : 10 - (Topic 3)**

You are designing an ASP.NET MVC 2 Web application that requires each user to register a user name and password before accessing restricted content.

You have the following requirements for user registration:

-  When the focus leaves the user name input field, validate that the user name does not already exist.
-  Display validation results before submitting the form.

You need to recommend a data validation strategy.



What should you recommend?



- A. Use jQuery to access server-side validation code.
- B. Use the Required attribute to annotate the user name property of the model. Call the `Html.EnableClientValidation()` method from the view.
- C. Use an UpdatePanel control to access server-side validation.
- D. Implement the `IValidator` interface on the model.

**Answer: A**

**Question No : 11 - (Topic 6)**

You are designing an ASP.NET Web application that will support multiple display languages.

You have the following requirements:

-  Change server control settings based on the selected language.
-  Enable strongly typed access to the resource objects.

You need to recommend a strategy for localizing server control properties.

Which strategy should you recommend?

- A. Wrap localized server controls with a `Localize` server control. In the `App_GlobalResources` folder, create a resource file that contains localized values with keys named according to the `<LocalizeId>.<ControlId>.<PropertyName>` format.
- B. Use implicit resource expressions and store the resource file in the `App_LocalResources` folder.
- C. Use explicit resource expressions and store the resource file in the `App_GlobalResources` folder.
- D. Add the `Localizable` attribute to the control definitions in the code-behind. In the `App_LocalResources` folder, create a resource file that contains localized values with keys named according to the `<ControlId>.<PropertyName>` format.

**Answer: C**

**Question No : 12 - (Topic 6)**

You are designing an internal Web application.

You have the following requirements:

- ✍ Use an existing data layer built on the Entity Framework
- ✍ Ensure that additional Entity Framework entities can be supported without additional coding.

You need to design the Web application so that users can add, edit, and delete data.

Which approach should you recommend?

- A.** Create an ASPNET Dynamic Data project.
- B.** Create an ASP.NET MVC 2 project and use the Entity Framework data layer as your model.
- C.** Create an ASP.NET Web Forms application and set the Data Source Id for each Grid View to an Entity Data Source control.
- D.** Create an ASP.NET Web Forms application and set the Data Source Id for each Grid View to an Object Data Source control.

**Answer: A**

**Question No : 13 - (Topic 6)**

You are designing an ASP.NET Web application that displays daily sales information.

The sales information is stored in a large Microsoft SQL Server database.

The database information is updated each night.

During the day, people use the Web application to display a set of standard sales reports based on the latest database information.

The SQL queries that are required to retrieve and display the database information can take from 20 to 30 seconds to execute.

You need to design the application to ensure that pages usually load in no more than 5 seconds.

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

- A.** Use SQL Server replication