Lab: Designing ASP.NET Core Web Applications

# Scenario

Your team has chosen ASP.NET Core Razor Pages as the most appropriate ASP.NET programming model to create the photo sharing application for the Adventure Works web application. You need to create a detailed project design for the application, and have been given a set of functional and technical requirements with other information. You have to plan:

* A model that you can use to implement the desired functionality.
* One or more Razor Pages that respond to users actions.
* The locations for hosting and data storage.

# Objectives

After completing this lab, you will be able to:

* Design an ASP.NET Core Web Application that meets a set of functional requirements.
* Record the design in an accurate, precise, and informative manner.

Estimated Time: 40 minutes

# Exercise 1: Planning Model Classes

## Scenario

You need to recommend a model that is required to implement a photo sharing application. You will propose model classes based on the results of an initial investigation into the requirements.

The main tasks for this exercise are as follows:

1. Examine the initial investigation.
2. Plan the photo model class.
3. Plan the comment model class.

## Task 1: Examine the initial investigation.

1. Open the InitialInvestigation document by using the following information:

* File location: Allfiles (C):\Labfiles\Mod02\01\_DesignProject\_begin

1. Enable the Navigation Pane feature.
2. Read the contents of the Introduction section.
3. Read the contents of the General Description section.
4. Read the Use Cases section and then examine the Use Case Summary diagram.
5. Close the InitialInvestigation document.

## Task 2: Plan the photo model class.

1. Open the DetailedPlanningDocument document and locate the Model section.
2. Based on your reading of the InitialInvestigation document, add and describe the Photo model classe in Table 1: Model.
3. Add properties to the model you created in Table 1: Model. The model will have many properties
4. Add data types to the properties. Each property will have one and only one data type.

## Task 3: Plan the comment model class.

1. Open the DetailedPlanningDocument document and locate the Model section.
2. Based on your reading of the InitialInvestigation document, add and describe a model class for Comment in Table 1: Model.
3. Add properties to the model class you created in Table 1: Model.
4. Add data types to the Comment properties.

**Results**: After completing this exercise, you will be able to create proposals for a model, and configure the properties and data types of the model classes.

# Exercise 2: Planning Pages

## Scenario

You need to recommend a set of Pages that are required to implement a photo sharing application. You will propose Pages based on the results of an initial investigation into the requirements.

The main tasks for this exercise are as follows:

1. Plan the Photo Pages.
2. Plan the Comment Web API Controller and Blazor Components.

## Task 1: Plan the photo Pages.

1. Open the DetailedPlanningDocument document and locate the Razor Pages section.
2. Based on your reading of the InitialInvestigation document, add the pages for photos in Table 2: Razor Pages.
3. Add actions to the pages for photos in Table 2: Razor Pages.
4. Add descriptions for each of the actions you have planned.

## Task 2: Plan the comment Api controller.

1. Based on your reading of the InitialInvestigation document, add a controller for photos in Table 2: Api Controllers.
2. Add actions to the controller for comments in Table 2: Api Controllers.
3. Add descriptions for each of the actions you have planned.

## Task 3: Plan the Blazor Components.

1. Based on your reading of the InitialInvestigation document, add the Blazor Components in Table 3: Blazor Components.
2. Add descriptions for each of the component you have planned.

**Results**: After completing this exercise, you will be able to create proposals for models, pages, controllers and components and configure their properties and data types.

# Exercise 3: Architecting an MVC Web Application

## Scenario

You need to recommend a web server and database server configuration that is required to implement a photo sharing application. You will propose details based on the results of an initial investigation into the requirements.

The main tasks for this exercise are as follows:

1. Hosting options.
2. Choose a data store.

## Task 1: Hosting options.

1. Based on your reading of the InitialInvestigation document, add a description of the web server arrangements that are suited to host the photo sharing application.

## Task 2: Choose a data store.

1. Based on your reading of the InitialInvestigation document, add a description of the database server arrangements that are suited to host the photo sharing application.

**Results**: After completing this exercise, you will be able to create proposals for hosting arrangements.

**Question**: What model classes should be created for the photo sharing application based on the initial investigation?

**Question**: What controllers should be created for the photo sharing application based on the initial investigation?

**Question**: What pages should be created for the photo sharing application?