

Adventure Works Photo Sharing Application (Proposed)

Detailed Planning Document

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Note: This file is an example solution for lab. It is not the only correct solution and your answers may vary.

Introduction

The author has examined the initial investigation document by Hines, Raghav, and Khan. Based on the use cases, technical requirements, and other content in that document, the author has created the detailed plans below. The board has already agreed that the photo sharing application will be built as a website based on Microsoft's ASP.NET MVC technology. Therefore the details presented here include the names and properties of model classes and controllers developers must create. Views have also been identified and wireframe diagrams included to help envision the user interface for important parts of the site.

The application design is likely to evolve throughout the development process as requirements change. The development team will adopt Agile practices to ensure such changes are reflected in the final product. Therefore this document should not be considered a complete definition of the final application.

MVC Model

Developers will create a model with the following model classes. For each model class, properties have been listed and descriptions given.

Table 1: MVC Model

Model Class	Description	Properties	Data Types
Photo	The photo model class represents a photo that authenticated users can upload to the website.	PhotoID	Integer
		Title	String
		PhotoFile	Binary
		Description	String
		CreatedDate	Date
		Owner	String
Comment	The comment model class represents a comment that authenticated users can add to photos. This enables users to discuss others' photos. Each comment is associated with just one photo.	CommentID	Integer
		User	String
		Subject	String
		Body	String
		PhotoID	Integer

MVC Controllers

Developers will create the following controllers. For each controller, actions have been listed and descriptions given.

Table 2: MVC Controllers

Controller	Action	Description
PhotoController	DisplayGallery (GET)	The action runs when the user requests the photo gallery page. The action obtains all the photos from the database and passes them to the DisplayGallery view.
	DisplayRecent (GET)	This action is similar to the DisplayGallery action except that only the most recent photos are obtained from the database. This smaller collection of photos is passed to the DisplayGallery view.
	DisplayPhoto (GET)	This action runs when the user clicks a “Details” link for a photo in a gallery. The action obtains full details of a single photo from the database and passes it to the DisplayPhoto view.
	AddPhoto (GET)	This action runs when the user clicks a “Add a Photo” link. The action creates a new instance of the Photo model class and passes it to the AddPhoto view.
	AddPhoto (POST)	This action runs when the user clicks “Save” in the AddPhoto view. The action saves the file and details of the new Photo to the database and redirects the user to the DisplayGallery view.
	DeletePhoto (GET)	This action runs when the user clicks a “Delete this Photo” link in the DisplayPhoto view. The action displays the DeletePhoto view, which requests confirmation for the deletion.
	DeletePhoto (POST)	This action runs when the user clicks “Delete” in the DeletePhoto view. The action deletes the current Photo, with its associate Comments, from the database and redirects the user to the DisplayGallery view.
CommentController	DisplayComments (GET)	This action runs when the DisplayPhoto view is displayed. The action requires the current PhotoID as a parameter and uses it to get all the comments for the current Photo from the database. The action returns the <code>_DisplayComments</code> partial view.
	AddComment (GET)	This action runs when the user clicks the “Add a Comment” link in the DisplayPhoto view. The action creates a new instance of the Comment model class and sets its PhotoID to be the ID of the current Photo. It passes this new comment to the AddComment view.
	AddComment (POST)	This action runs when the user clicks “Submit” in the AddComment view. The action saves the details of the new comment in the database and redirects the user to the DisplayPhoto view.

MVC Views

Developers will create the following views. Each view has been listed together with the controller it is associated with.

Table 3: MVC Views

Controller	View	Description
PhotoController	DisplayGallery	This view displays a collection of Photos at thumbnail size. For each photo the Title, Owner, and Created Date values are displayed.
	DisplayPhoto	This view displays a single Photo at full size. The Title and Owner are displayed above the photo. The Photo Description, Created Date, and other values are displayed beneath the photo. Under these details, all the Comments for the current Photo are listed, with an "Add a Comment" link.
	AddPhoto	This view displays a form with which the user can upload and describe a new Photo.
	DeletePhoto	This view displays a form with which the user can confirm a Photo deletion. The view displays details of the current Photo, such as its Title and Description.
CommentController	DisplayComments	This partial view, which is used on the DisplayPhoto form, displays all the Comments associated with the current Photo.
	AddComment	This view displays a form with which the user can create a new comment for a specified Photo.

Hosting Recommendations

Since the photo sharing application will be developed in ASP.NET MVC, it must be hosted on a Microsoft web server. The author recommends the following hosting configuration:

Web Server

The author recommends using Windows Azure to host the Photo Sharing application. Windows Azure can host any ASP.NET website, including the MVC application proposed in this document. Scaling is very simple because Microsoft, not Adventure Works, is responsible for adding server resources at times of high traffic. Costs are minimal: they depend on the amount of data served to visitors but it is not necessary to maintain our own hardware.

Database

The author recommends using SQL Database, within Windows Azure, to host the Photo Sharing application underlying database. As for the web server, this recommendation ensures high-availability hosting for the database with good value for money. This makes particular sense if the web site is hosted in Windows Azure.