Lab 4 – Repositories and Unit Testing Controllers

CS296N, Web Development 2: ASP.NET

Objectives

Get practice:

- Designing a domain model
- Using the Repository Pattern
- Testing Controller methods using DI (Dependency Injection)
- Publishing to Azure

Part 1: Textbook Exercise

Do the first part of the project in Freeman Ch. 8, SportsStore: A Real Application, pages 191 to 207.

Part 2: Community Information Web site

New Models

Create a domain model for a forum that you will add to the Community Information web site you already created. First make a UML diagram, and then write the code. The model should hold the following information (you can decide on the exact fields):

Members

- Name
- E-mail address
- Any other information you think is relevant

Messages

- Subject
- Body
- Date
- From
- Topic (like: Events, For sale or rent, Neighborhood watch, etc.)

Note: you will want to add a MessageContrller, but <u>not</u> a MemberController. You can add a View to display the messages, but do <u>not</u> add a login page for members yet. Wait until after you have learned to use ASP.NET Identity for authentication and authorization.

Repositories

Create a repository for each of your models and add it to your Models folder, or alternatively, create a Repositories folder and put them there (I personally prefer this). For each repository, do the following:

- Create an interface for each repository
- Create a "real" repository. This repository should have some temporary, hard-coded, data in it. (Put hard-coded members in the MemberRepository, and hard-coded messages in the MessageRepository.)
- Create a Fake repository, with the same hard-coded data in it.

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<u>Unit Tests</u>
Add a Test project
- Write tests for at least two Controller methods related to Members
- Write tests for at least two Controller methods related to Messages

<u>Azure</u>
Publish your web site to Azure.

Submission to Moodle

<u>Beta Version</u>
Upload the following to the Beta + Review Forum:

For Part 1:

1. A document containing screen-shots of the web app from Ch. 8 in the textbook running in your browser. (Please use .docx or .pdf format.)

For Part 2:

2. A document containing UML diagrams of your two new models.

3. A zip file containing your community web site's Visual Studio solution folder.
Or, a link to a repository containing your web site solution source code. You can put the link on the same document with the report on your tutorial exercise.

4. A code review of your lab partner's work.

<u>Production Version</u>

1. Items 1 – 3 above, but revised as needed.

2. A link to your web site running on Azure. (You can put the link on the document containing the new models).

3. The code review of your work (the one done by your lab partner) with the second column ("Production") completed by you.