FIT5032 Learning Summary

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Chola Naga Sai Raghu Varma Kallepalli:29876478

Introduction

This report summarises what I learnt in FIT5032 {Internet Application Development}. It includes a self-assessment against the criteria described in the unit outline, a justification of the pieces included, details of the coverage of the unit's learning outcomes, and a reflection on my learning.

Overview of Pieces Included

This section outlines the pieces that I have included in my portfolio

1. Task 1.1

   Setup eFolio as per the specification
   > The eFolio has been setup as per the requirement, Shared and included eFolio URL in the first tutorial also submitted the working Visual Studio 2019 Community Edition IDE IIS localhost screenshot

2. Task 1.2

   Research and list five different IDEs currently used in the Agile software development industry
   > Listed all the IDE's that are being currently used in the Agile software development in the industry alongside also discussed five core features of Visual Studio 2019 Community Edition as an IDE

3. Task 2.1

   CSS example and Demonstration of responsiveness of Bootstrap
   > Creating the stylesheets to change the look of the html page. Like, making the image responsive when hovered on it, or changing the background color, font, text color and creating custom styles for different blocks of code. Also, implementing bootstrap with custom class prefixes etc.

4. Task 2.2

   Database First Development of ASP.NET MVC Web Application using Visual Studio Scaffolding
   > In this I have created my first web application with database init using Database First Approach along with creating views and scaffolding techniques.

5. Task 3.1

   Introduction to C#
   > Created a first C# class that implements a method which returns a string as an output when being called. Aslo, modified the

HomeController to class the method implemented. In this task I have been introduced with the code snippets which can be used to autocomplete, suggestions to the code.

6. Task 3.2

Version Control

In this task I have created a Github account and added a new project to make version control for the web application. Also, added my tutor as a collaborator to the repository to view the progress.

7. Task 4.1 & Task 4.2

Model First Development & Code First Development of ASP.NET MVC Web Application using Visual Studio Scaffolding

In this task I have created a web application with database using Model First approach and Code First approach instead of Database Approach. Also, I have learned what is the difference between Database, Model, Code First approaches.

8. Task 5.1

JavaScript - Notify.js, Understand the difference between async and defer

Used Notify.js script to send notifications or alerts to the user to show the message or feedback to the users. Also, understood the main difference between async and defer for javascripts.

9. Task 5.2

Bootstrap Datepicer

Have completed making the datepicker using bootstrap and also added restrictions for the datepicker like disabling the dates that are past from the current date.

10. Task 6.1

Using Data Annotation for view model validation

Used Data Annotations for validating the input given by the user before sending the data to the database. Using this we can provide the feedback to the users if he entered the wrong information in the respective fields.

11. Task 6.2

Understand jQuery unobstructive validation

Understood the importance and working of jQuery and made a document with all the important points and uploaded to the eFolio.

12. Task 7.1

    Using ASP.NET Identity

      Have restricted few views to an unauthorized user.

13. Task 7.2

    Setup MS Identity to sign in with Google Account

      Implemented a new login way, so that the user no longer has to register
      for the website to access all features. The can be able to log in using
      his Google account to access all the features in the web application.

14. Task 8.1

    Obtain API key from SendGrid and Integrate SendGrid into ASP.NET
    application for sending emails

      In this tutorial I have gone through the code which is being uploaded to
      the moodle and understood by reverse engineering process. After
      understanding the code, I have enabled the SendGrid api and got the
      key for sending the mails using web application.

15. Task 8.2

    Features of 3rd party emailing tools, advantages and disadvantages of
    using 3rd party emailing tools

      In this section have found multiple 3rd party emailing tools other than
      SendGrid. Also, found the advantages and disadvantages of 3rd party
      emailing tools.

16. Task 11.1

    Deploy an ASP.NET MVC Project in the Azure Cloud

      In this task I've deployed my web application to the Azure Cloud.

17. Task 11.2

    Unit Tests for ASP.Net MVC

      In this task I've learnt how to test the ASP.Net MVC application.

Coverage of the Learning Outcomes

This section outlines how the pieces I have included demonstrate the depth of my understanding in relation to each of the unit's learning outcomes.

LO 1: Demonstrate the impact of the history of web applications development on current web-technology

The following pieces demonstrate my ability in relation to this LO:

- Task 2.1
  - In this activity we can see that the web applications can be modified to different styles as the user wants. Historically the web pages are plain without any animations or styles.
- Task 6.1
  - In the modern web application development the view can be hidden or only accessed by only authorized users.
- Task 7.1
  - The security of the web applications has also changed when compared to the development of web application in history
- Task 9.2
  - In this activity we have developed a new web application using .NET Core and came to know the differences between .NET framework and .NET Core.
  - Using different frameworks we can unlock different features and can develop the web application with ease and in less time.

LO 2: Design, construct and publish web-database applications

The following pieces demonstrate my ability in relation to this LO:

- Task 2.1
  - In this task I have changed the appearance of the application by using CSS, JavaScript and bootstrap for changing the design, responsiveness of the web-application and style.
- Task 4.1 & 4.2
  - I have used different approaches in constructing the database for the web application like Model, Code and Database first approach.
- Task 11.1
  - To publish the web application Azure cloud played a major role. This activity helped me publish the web-application to the cloud.

LO 3: Analyse and critique the key technological issues confronting developers building web-database applications

The following pieces demonstrate my ability in relation to this LO:

- Task 4.1 & 4.2
  - Using this task I have managed to understand the advantages and disadvantages of different approaches. So this helped me analyse and critique the issues and feasible solution for choosing an approach.
- Task 5.1
  - Form the learning, I analysed the key difference between async and defer. To increase the page loading speeds we need to use a particular methods for reducing the loading time and better optimisation.
- Task 8.2
  - This task allowed to understand the key issues of difference 3rd part emailing tools and confronting developers building web-database applications.

LO 4: Test the key features of programming languages which are commonly used for developing web-database application

The following pieces demonstrate my ability in relation to this LO:

- Task 5.1
  - We can add 3rd party libraries and use them to implement special features instead of writing and creating the libraries by ourselves.
- Task 8.1
  - Integrating 3rd party API with the Visual Studios is also a key feature.
- Task 11.2
  - The key feature of the application is to create the test cases and run to see the test passes or test failures. It is important to have this feature for large and professional web-application also which undergoes continuous integration.

LO 5: Assess the MVC design pattern and construct a web-database application using the MVC design pattern

The following pieces demonstrate my ability in relation to this LO:

- Task 4.1 & 4.2
  - In the Model First approach, first the model is being implemented then from the models the ddl (Data definition language) is being generated then the models views and controllers are generated using the scaffolding technique. This shows the construct of a web-application using the MVC design pattern.
- Task 6.1
  - The input fields are validated using the model, view and controller.

LO 6: Apply, analyse and critique a professional approach towards the development of web-database applications

The following pieces demonstrate my ability in relation to this LO:

- Task 2.2, 4.1 & 4.2
  - Exploring different approaches for the database design and development for the web-application.
- Task 11.1
  - This task allowed me to analyze and critique the implementation of CI and CD in Agile development.

Reflection

The most important things I learnt:

Previously, before enrolling in this unit I've used visual code or a text editor to write html code and experiment it. Now after completing the tutorials I came to know that code can be automatically generated like generate views and model for the database and other pages. I've learnt to integrate 3rd party api into the application and complete the tasks with ease. Can also say that Visual Studios is one of the best IDE's available to develop web application. After developing the web application I can even host my website in the cloud using Azure cloud services. Ultimately, I learnt the concepts like MVC, different Frameworks, Designing website using css, bootstrap and validations using jQuery, Database, Model and Code first approaches, as well as installing packages from the package manager for enabling special features, integrating 3rd party API's for sending mails, displaying Maps and External Authentication for the web application.

The things that helped me most were:

The feature that generates the code all by itself from the database like generating views, models and controllers. Using this helped me in implementing new features rather than working on the coding part from scratch. This is really helpful when someone coming from no background knowledge in coding area.

I found the following topics particularly challenging:

I found that retrieving, updating the data in the database is challenging at the beginning due to automation generation of views and controllers. After some research and learnings I understood how the data is being flown from the front-end to the back-end. Finally, I have implemented a booking constraint for the topic I felt challenging.

I found the following topics particularly interesting:

I found integrating the API's with the web applications are very interesting. Like interesting SendGrid, Google JavaScript Maps, Google External Authenticator API and publishing the web application in the cloud.

I feel I learnt these topics, concepts, and/or tools really well:

From the activities I've learnt designing the website, making different animations, interactive images, cards, navigation bar in different screens where made possible by using CSS, Bootstrap and JavaScript. Learned to implement database in different ways like Database, Model and Code First approaches. Tasks which are difficult to achieve can also be easily implemented using different libraries like generating PDF from URL etc. Also, learnt to use different api tools for implementing few tasks.

I still need to work on the following areas:

I feel like I still need to work on generating charts, auto filling the data of the current logging in user while booking a flight or for making a review. Need to work on front end and user experience. Would like to learn more on different framework like .NET Core and Web Forms. I need to improve on writing test cases for the functionalities of the application. Would also like to work on SignalR features and optimisation of the code.

My progress in this unit was …:

Name ↑	Owner	Last modified	File size
My Drive > FIT5032 eFolio Chola Naga Sai Raghu Varma Student 29876478 ▾			
📁 Assignment 3 files	me	14 Oct 2019 me	—
📁 Week03	me	13 Aug 2019 me	—
📁 Week07	me	13 Sep 2019 me	—
📄 Design Report(Modified).docx ★	me	17:25 me	198 KB
📄 Studio01Doc	me	17 Sep 2019 Miffy Wu	—
📄 Studio02Doc	me	17 Sep 2019 Miffy Wu	—
📄 Studio04Doc	me	17 Sep 2019 Miffy Wu	—
📄 Studio05Doc	me	17 Sep 2019 Miffy Wu	—
📄 Studio06Doc	me	17 Sep 2019 Miffy Wu	—
📄 Studio08Doc	me	22 Sep 2019 Miffy Wu	—
📄 Studio11Doc	me	20 Oct 2019 Miffy Wu	—

This unit help me in learning how to develop a web application using a wonderful IDE with robust frameworks.

This unit will help me in the future:

I think this Unit can help me understand new technologies in future. Basically this Unit gave me a deep dive on how a web application works. If I take a Unit related to web development I think I will be easier for me to understand by using the knowledge I gained in this Unit and works as a base for understanding new technology. Ultimately, this Unit can help me in developing the industrial experience.

If I did this unit again I would do the following things differently:

If I were to do this unit in a different way, I'd concentrate more on user experience and front end design. since this time we have just concentrating more on back- end functionalities it is also important to represent our application in a good appearance as well. Also, look forward to implement new APIs' for other functionalities.

Declaration

I declare that this learning summary, eFolio tasks and the linked code are my individual work except group submission. I have not copied from any other student's work or from any other source except where due acknowledgment is made explicitly in the text and code, nor has any part of this submission been written for me by another person.

Signature: Chola Naga Sai Raghu Varma Kallepalli