FIT5032 Assignment Portfolio V1.0

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INTERNET APPLICATIONS DEVELOPMENT

OVERVIEW:

1. Portfolio Background and Description

FIT5032 Assignment portfolio comprises four deliverables: **Design Report**, **ASP.NET MVC application**, **Research Report** and the **Learning Summary.**

Assume that you work for an Australian Internet Applications development company (**ASPNET Pty Ltd)** in Melbourne. You are responsible to design and develop a (fictitious) web application for a customer of the company and research on different technologies to meet the customer's future business requirements.

Your customer is a local **Tourism and Hospitality** company with around 100 staff. Your customer is aiming to launch a new Web Application to support end users.

The rest of this specification is organised into two parts: 1) the business requirements, and 2) the instructions how you should approach this task and grading method.

2. Business requirements

The new Web Application must be able to meet the following business requirements:

BUSINESS REQUIREMENT (A):

BR (A.1): Development Stack

The new Web Application must be developed using C# ASP.NET MVC and MS SQL Database.

BR (A.2): Responsiveness

The new Web Application must have responsiveness capability to be compatible with various devices.

BUSINESS REQUIREMENT (B):

BR (B.1): Authentication

The new Web Application must have authentication mechanism to provide confidentiality.

BR (B.2): Date

The new Web Application must use "Date" in any of the stored value.

BUSINESS REQUIREMENT (C):

BR (C.1): Role based authentication

The new Web Application must have role-based authentication mechanism with minimum two roles to facilitate CRUD (*Create, Read, Update and Delete*).

BR (C.2): Validations

The new Web Application must implement validations with minimum two types of validations.

BR (C.3): Data Table

The new Web Application must display data table from MS SQL Database with minimum two tables.

BUSINESS REQUIREMENT (D):

BR (D.1): Authentication using external API

The new Web Application must have an external authentication mechanism.

BR (D.2): Geo Location

The new Web Application must display a map with minimum two features[1].

BR (D.3): Email

The new Web Application must be able to send email.

BR (D.4): Security

The new Web Application must implement security to protect from online attacks such as XSS.

BUSINESS REQUIREMENT (E):

BR (E.1): Chart

The new Web Application must display a dynamic chart or graph using data from MS SQL Database.

BR (E.2): Bulk Email

The new Web Application must be able to send bulk email with an attachment.

BR (E.3): Rating

The new Web Application must implement a rating feature.

BR (E.4): Constraint

The new Web Application must implement booking constraint.

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[1] Such as search place of interest, navigate between places and trip information etc. Background will be blue is not a feature.

BR (E.5): Innovation

The new Web Application must implement any one innovative feature.

3. Instructions and Grading Method

You must select any one of the recommended services to demonstrate your web development skills while meeting the above business requirements:

- Hotels
- Restaurants
- Cars
- Flights
- Events
- Cruises
- Any other innovative service as approved by Tutor

A **stepped approach is mandated** to implement the new ASP.NET MVC Web Application. Before you move on to implement a higher-level business requirement i.e. BR (A) towards BR(E), you will need to show your tutor your work for feedback first. The following table outlines grading overview:

Deliverables	Grade
Final Learning Summary from EFolio	Mandatory
BR (A1, A2) and BR (B1, B2)	C → C+
BR (C1, C2, C3)	C+ → C++
BR (D1, D2, D3, D4)	D → D++
BR (E1, E2, E3, E4, E5)	HD → HD+
Research report	HD+ → HD++
Final Demonstration	Mandatory for D/HD

Please refer to the Design report, Research report and Learning Summary templates in Moodle.

DEVELOPMENT HINTS (IN ADDITION TO LECTURE AND STUDIO MATERIALS)

- Responsiveness can be achieved using Bootstrap, Materialize CSS or Foundation
- Log in & Log out can be achieved using Visual Studio Default Individual Identity
- Displaying features on a Map such as search, routing and geocoding etc. can be done using MapBox, Mapify or similar API
- Displaying features on a Calendar such as event constraint can be done using FullCalendar.io API
- DataTables supports pagination features. Mock data can be generated using Mockaroo

- [SendGrid API](#) can be used for Email
- SignalR / WebAPI / AngularJS can be used to implement any extended innovative feature

SUBMISSION AND DEMONSTRATION

You will be given the opportunity to show your interim work to your tutor during the studio sessions or during the consultation times. This will give you an opportunity to fix issues and improve. You will receive feedback on Assignment Portfolio in Week 4 (Credit level design), Week 7 (Credit level code) and Week 10 (D/HD level design and code). To receive feedback on time, please upload work in progress in the EFolio.

The final assignment portfolio (Design Report, ASP.NET MVC application, Research Report and the Learning Summary) submission is due in Moodle at the end of Week 12. All demos should be completed in Week 12 or before.