COS30043 – Interface Design and Development

Learning Summary Report

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Self-Assessment Details

The following checklists provide an overview of my self-assessment for this unit.

	Pass (P)	Credit (C)	Distinction (D)	High Distinction (HD)
Self-Assessment (please tick)		✓		

Self-assessment Statement

	Included (please tick)
Learning Summary Report	✓
Use of Bootstrap that demonstrate coverage of core concepts	✓
Use of VueJS that demonstrate coverage of core concepts	✓

Minimum Pass Checklist

	Included (please tick)
Progress on Credit Tasks	✓
All Pass Tasks signed off	✓

Minimum Credit Checklist, in addition to Pass Checklist

	Included (please tick)
Credit and Pass Tasks done, and Progress on Distinction Tasks.	
Custom program meets Distinction criteria	
Design report with screenshots for custom program	

Minimum Distinction Checklist, in addition to Credit Checklist

	Included (please tick)
Research report, and associated pieces	
Custom project meets HD requirements	

Minimum High Distinction Checklist, in addition to Distinction Checklist

Declaration

I declare that this portfolio is my individual work. 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, nor has any part of this submission been written for me by another person.

Signature: BAO

Introduction

This report summarises what I learnt in COS30043 – Interface Design and 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 intended 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. **Lab 1:**
    - **Lab 1.1:** This lab is simply about us submitting our past course website assignment (COS10005).
    - **Lab 1.2 – Hello World:** This lab introduced us with the necessary tools which is brackets IDE to code as well as preview websites.
    - **Lab 1.3 – WAI form example:** This lab introduces us to the WAI checker (Web accessibility checker) so that we could improving the original code to be WCAG-compliant (Web Content Accessibility Guidelines).
    - **Lab 1.4 – WAI Table example:** This lab is the same as the last one, instead this time we are tasked to improve a table.
2. **Lab 2:**
    - **Lab 2.1 – Hello World 2:** This lab introduces us to Bootstrap framework by making us create a simple Hello World website also require us to answer a few questions.
    - **Lab 2.2 – My calculator:** This lab tasked us in making a calculator application with a focus on div wrappers on how to wrap objects and utilize row-col layout of bootstrap to display.
    - **Lab 2.3 – My Bootstrap template library:** This lab tasked us of making a web template while utilize the bootstrap framework to style it.
3. **Lab 3:**
    - **Lab 3.1 – String test:** With an introduction to VueJS framework, this lab tasked us with making a string test website that check the name input using Vue conditional directives.
    - **Lab 3.2 – Lookup app:** Using VueJS loops. This app populates a table with data and adding a filter system that will display the information that the user is looking for.
    - **Lab 3.3 – Compute app:** This BMI computing app calculates the user's input height and weight and display the BMI message "Underweight, normal, obese".
    - **Lab 3.4 – Registration Form App:** Using what we learned throughout the previous labs, this app utilizes various VueJS directives and create a directive web application, filter out also display user information.
4. **Lab 4:**
    - **Lab 4.1 – Guessing Number Game:** This lab tasked us with making a guessing game where player must guess a number that is randomly-generated through hints.
5. **Lab 5:**
    - **Lab 5.1 – Status Posting Web:** This status-posting website allow users to insert and delete status using components.
    - **Lab 5.2 – Menu List:** With further usage of components, this website assigned an array value to display a menu list.
    - **Lab 5.3 – Unit information system:** Same usage of components as the last Lab, this website allows users to see detail information of a unit by clicking into it.
6. **Lab 6:**
    - **Lab 6.1 – Registration Form 2:** An improvement of the previous registration form app using VueJS and Bootstrap.

7. **Lab 7:**
    - **Lab 7.1 – getJSON:** This lab introduces us to getJSON and how to use it to get external data (JSON file).
    - **Lab 7.2 – Fetch Units:** Using getJSON, this website jetch the unit info from the JSON file and populate to the table that displays the information.
8. **Lab 8:**
    - **Lab 8.1 – List of Units:** A unit list webpage that make use of the pagination system.
9. **Lab 9:**
    - **Lab 9.1 - Single Page Application:** For this task, we got to create a whole website application that functions on only one page using VueJS, pHp and Bootstrap.
10. **Lab 10:**
    - **Lab 10.1 – My study:** Using VueCLI, this app is a single page application with the features from the past labs: status posting, components table display and navigation using routers.

Coverage of the Intended 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 intended learning outcomes.

ILO 1: Apply Design

Apply fundamental design concepts and standards to the development of user interfaces

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

- **Lab 2:** This lab introduced me to the bootstrap framework, which is one of the most useful frameworks. Using Bootstrap helps me a lot in allocating space and size of each element in a logical way instead of using traditional CSS. This lab also practices us in fundamental design concept with designing original templates.
- **Lab 6:** This is an app where we need to show proficiency with Bootstrap and design principles. We must logically group related information and properly space UI elements to make an organized registration form.

ILO 2: Use Frameworks

Use contemporary frameworks to create dynamic user interfaces.

- **Lab 2:** Lab 2 introduced me to the Bootstrap CSS framework, which simplifies building dynamic user interfaces. I learned the many Bootstrap tools and how to utilize the column-row layout.
- **Lab 3:** Lab 3 introduced me to VueJS, a JavaScript framework for building single-page app interfaces. I learned Vue directives that bind data, display array items, and conditionally render elements.
- **Lab 4, 5, 8:** Labs 4, 5 and 8 focused on VueJS features like components for modular UIs, routers for switching between views, and pagination to display data between pages.
- **Lab 6:**

ILO 3: Develop User Interfaces

Design and develop user interfaces optimised for a range of devices and platforms.

- **Lab 2:** Bootstrap's grid layout in Lab 2 made responsive design much easier by automatically responsive to different screen sizes. Later labs applied this to build applications.

ILO 4: Evaluate User Interfaces

Evaluate user interfaces with respect to usability and accessibility using appropriate techniques, and propose improvements.

- **Lab 1:** Lab 1 introduced the Web Accessibility Checker to detect accessibility issues and conform with WCAG standards. Two exercises helped me practice in using the tool and improving websites for accessibility and usability.

Reflection

The most important things I learnt:

Throughout the course, I have learned about the 2 powerful tools in front-end design: Bootstrap and VueJS to create and design a website that fits the fundamentals of basic design concept. Along from that, my knowledge in page layout got more and more better after this course by expanding the grid system in Bootstrap and various elements.
After this course, I believe that I have learnt a lot in developing a user interface that corresponds to the basic standards of design.

The things that helped me most were:

- **VueJS and Bootstrap official documentation:** These websites gave a clear insight of what can each functions do and gave clear examples on when to use them. This is by far one of the best documentations for me to learn.
- **School materials:** The materials that Swinburne provide are clear and informative. These materials have played a major role throughout my learning journey in this course.

I found the following topics particularly challenging:

- **VueJS:** Since Bootstrap is a CSS framework, I only found myself having some trouble with VueJS functions. It uses a quite different approach from my normal usage of JavaScript so it still a confusing framework to work on. But overtime, I believe I can update my knowledge and use Vue more efficiently.

I found the following topics particularly interesting:

- **VueJS:** Though it was one of the hard topics to work on, I still see the topics that related to VueJS is fundamental and interesting to work with.

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

- **Bootstrap:** I've been using bootstrap before this course this wasn't a challenge for me to use it again in this course. This tool is one of the most powerful tools in creating user interfaces more friendly and aesthetically pleasing without having to write a long, confusing and frustrating CSS file.

I still need to work on the following areas:

- **VueJS:** Like I said above, my VueJS skill is still one of the most lacking skills throughout this course. I will need to work more on improving my knowledge if I want to use VueJS proficiently in the future.

My progress in this unit was …:

Though my progress was acceptable to say the least, it is still far from being a good progress since I still lack a lot of skills and knowledge in VueJS and design concepts. Therefore, I can't do Distinction or High Distinction tasks.

This unit will help me in the future:

This course will definitely help me in developing my skillset in frameworks like Bootstrap and VueJS. Also, with these design concept that I learned, it would play a great role in my journey as a front-end developer

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

If I did this unit again, I would focus more on improving my knowledge of VueJS rather than focusing too much on Bootstrap design on each task. Also, I have to manage my time into studying more than just running tasks, which prevent me from doing any D/HD tasks.