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)			√	

Project task checklist

Check the boxes for each task you have completed.

☒ Pass task 1.1
☒ Pass task 1.2
☒ Pass task 1.3
☒ Pass task 1.4
☒ Pass task 2.1
☒ Pass task 2.2
☒ Pass task 2.3
☒ Pass task 3.1
☒ Pass task 3.2
☒ Credit task 3.3
☒ Credit task 3.4
☒ Pass task 4.1
☒ Pass task 5.1
☒ Pass task 5.2
☒ Pass task 5.3
☒ Credit task 5.4
☒ Credit task 6.1
☒ Distinction task 6.2
☐ High distinction task 6.3
☒ Pass task 7.1
☒ Pass task 7.2
☒ Credit task 8.1
☒ Credit task 9.1
☒ Pass task 10.1
☐ High distinction task 10.2
☒ Pass task 11.1

	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: John Hewitt

Introduction

This report summarises what I learnt in COS30043. 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. Pass task 1.3: Form accessibility provides. Task to improve user access issues in a form.
2. Pass Task 1.4 Table accessibility. To improve the quality of web pages using assistive technologies in a HTML table.
3. Pass Task 2.1 Getting Bootstrap up and running provides an understanding in how to get Vue Js framework working.
4. Pass Task 2.2 My Calculator is a web app which provides learning using bootstrap layout.
5. Pass Task 3.1 String test web app with VueJS. Create a small web application that outputs dynamic messages to users.
6. Pass Task 3.2 Lookup Web App. n VueJS, it is possible to create programs that dynamically generates HTML elements using an array of data objects. In this task, you will create a small web application that will list down a list of units in a table and allow the user to filter by unit code and unit description
7. Credit Task 3.3 Compute Web App. Uses expression and conditional directives to dynamically compute the body mass index (BMI) and output custom message to users.
8. Credit Task 3.4 Registration form web app. Conditional and loop directive in VueJS makes it possible to create interactive user forms
9. Pass Task 4.1 Event handling. web application that uses controllers to generate a random number for guessing,
10. Pass Task 5.1 Creating components. web app that allows users to post status on a timeline, and each timeline will have its own delete button to delete the message.
11. Pass Task 5.2 Creating custom filter. A single APP that converts decimal numbers to Roman Numerals
12. Pass Task 5.3 Parent child communication. Create an app that initialise a model with an array of strings and create a view that lists the array.
13. Credit Task 5.4 Creating router. web app that allows users to click of a unit to show more information
14. Credit Task 6.1 My registration form. To create a registration form that is styled with Bootstrap and validated using VueJS.and vuetify.
15. Distinction Task 6.2 Custom web application.
16. Pass Task 7.1 Requesting external data. Tol use jQuery getJSON() method to retrieve data from an external source.
17. Pass Task 7.2 Retrieving data from a text file. Use JavaScript fetch() method to retrieve data from a text file to generate a table in MySql database.
18. Credit task 8.1: My table. This web application provides learning of pagination using Vue js-Paginate.
19. Credit Task 9.1 Single page application. To create a single page application including router, tab and pagination.
20. Pass Task 10.1 Creating a single page application using VueCLI . To use Vue CLI and nodejs to create a single page application.

Coverage of the Unit 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.

ULO 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 ULO:

- In Coding rooms, I have received a completed satisfactory mark for all the assignments I have submitted. I have completed all assignments related to the ULO outcomes for this unit.
- Nearly all the assignments submitted to coding rooms required skills and concepts to develop user interfaces.

ULO 2: Use Frameworks

Use contemporary frameworks to create dynamic user interfaces.

- The use of bootstrap framework is demonstrated in a number of assignments especially the calculator grid design. I also applied bootstrap to produce a dynamic interface in my digital bowls scorecard in assignment6.2
- The use of Vue js framework provides many means to create a dynamic user interface using filters, validators, automatic functions and calculators etc. I have shown skills in these areas in the registration form, BMI calculator and Roman number calculator assignments.
- I also utilised vuetify and NodeJS to create dynamic user interface which is especially shown with Assignment10.1

ULO 3: Develop User Interfaces

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

- I did try to keep in mind the importance of developing interfaces optimised for all devices. The frameworks incorporate many of the features to work with all devices but it is still important to test and practice on different devices. The assignments 9.1 and 10.1 which required to test on a web server also encouraged me to develop and optimise my code to suit all devices and platforms.

ULO 4: Evaluate User Interfaces

- The ability to evaluate user interfaces for all the different types of users and abilities thereof is a very important factor to consider when designing and building any computer app or website. All code should consider these factors and I think this is evident in all the assignments I have completed for this unit.

Reflection

The most important things I learnt:

The most important lesson I learnt was how important and useful frameworks can be to produce better websites. The understanding of frameworks such as Bootstrap, Vue and Vuetify gave me greater knowledge in how to build more user responsive web applications and build to cover all sorts of user devices. Bootstrap filled in many of the missing css features for me and Vue and vuetify helped me to overcome some of the limits to my Javascript knowledge.

The things that helped me most were:

The lecture videos were very good and gave me real working knowledge to build the code for the assignments. In this unit the sample code and module notes provided at the end of the unit were essential in my understanding of this unit and ULO's. The collaboration videos and other support provided by the ELA was very helpful for me. In this unit I did also see the benefit of using a coding room or real time web server to help me test and use my code. I did find some elements of the coding room a bit slow and clumsy but overall, a useful part of the unit.

I found the following topics particularly challenging:

Some parts of this units were a bit challenging to me and did take me a bit longer to understand and complete the assignments. Any task requiring more complex JavaScript methods or components did provide me with a challenge. However generally the answer was in the class notes or with some discussion or research on the web.

I found the following topics particularly interesting:

I did find the whole unit interesting. The unit was presented in a good way and made it a more enjoyable and engaging to learn the different frameworks. The topic that I found the most interesting and beneficial for me was the Nodejs topic. I found this topic, albeit in connection with the bootstrap and Vue frameworks I learnt in previous units, gave me the knowledge to develop and load up onto a server a full SPA that could be edited for minor adjustments. It really showed me the benefits gained from frameworks and how they can be a proper package not just individual html, css or js files.

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

There were many things about this unit which I think I learnt well, and they will be a great help for me. I feel now I have much better knowledge of how bootstrap provides a framework to build a very responsive website for many types of devices by just understanding the classes and concept of grid and box layouts. I know there is much more for me to learn I think now I have the basis of a sound knowledge in how to use Vue to build filters, validate forms and import and export data from a json file or database and then display that data in a more user-friendly manner

I still need to work on the following areas:

Like many parts of web design and programming the units provide a good basis but I know there is much more to learn and practice. To become proficient in the many topics and frameworks studied in COS30043 will require me to design and build my own SPA. I have made a start with this with my digital bowls scorecard but will need to fully develop that product and create more apps to fine tune all the skills I have learnt in this unit.

This unit will help me in the future:

As part of my ICT course, I have now completed units in HTML, CSS, JavaScript, PHP, Cplus, Ruby, MySQl and Machine language programming. Using these languages and combined with the skills I have learn in COS30043 will help me in the future to develop my own SPA's and even consider employment in producing SPA'S.

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

I found this unit was structured very well and it provided me with a clear understanding and I don't think I would have done anything differently. As I learnt from other units, I found it was important to build and develop your own code and not rely to much on searching for code on the web. In this unit I believe I have done that admittedly the very good samples provided in this unit did help me to build my code. Thank you to all involved in this unit, I have enjoyed it and believe it will be helpful for me.