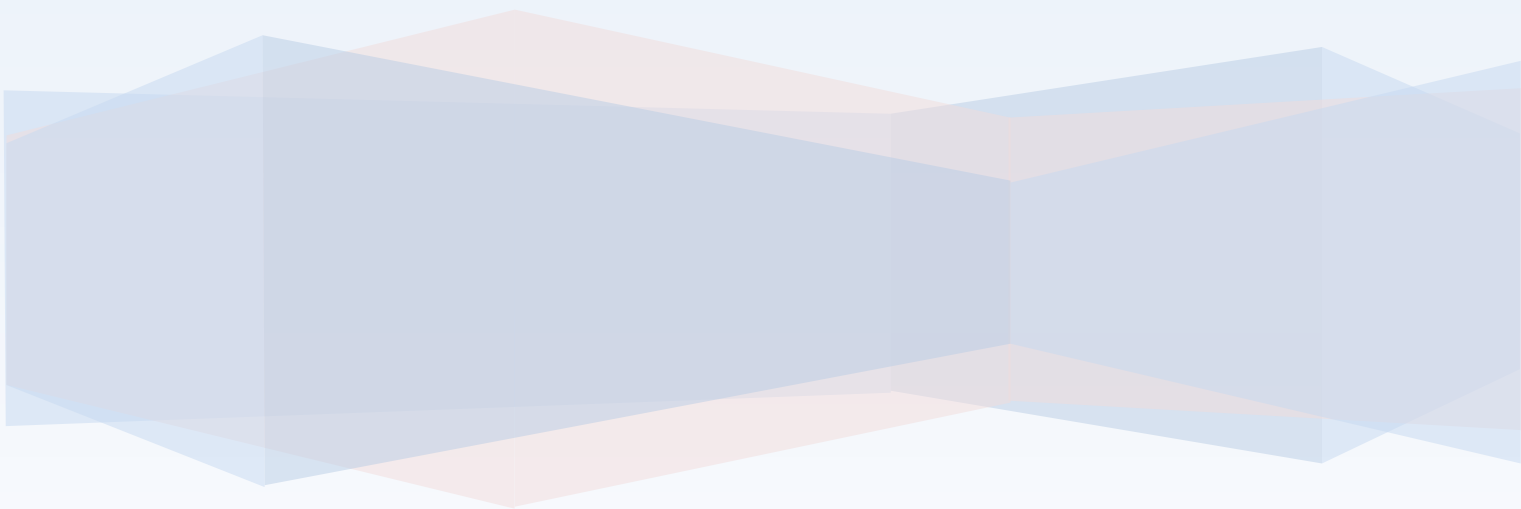


# COS30043 – Interface Design and Development

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*Learning Summary Report*

*Thenura Dulnath Kuruppuarachchi (103512993)*



## Self-Assessment Details

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

	Pass (D)	Credit (C)	Distinction (D)	High Distinction (HD)
Self-Assessment (please tick)		<input checked="" type="checkbox"/>		

### *Self-assessment Statement*

	Included (please tick)
Learning Summary Report	<input checked="" type="checkbox"/>
Use of Bootstrap that demonstrate coverage of core concepts	<input checked="" type="checkbox"/>
Use of VueJS that demonstrate coverage of core concepts	<input checked="" type="checkbox"/>

### *Minimum Pass Checklist*

	Included (please tick)
Progress on Credit Tasks	<input checked="" type="checkbox"/>
All Pass Tasks signed off	<input checked="" type="checkbox"/>

### *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: Thenura Dulnath Kuruppuarachchi

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## 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...

- **1.1P – Web Application developed in my high school**
- **1.2P – Hello world app**
- **1.3P – Form validation**
- **1.4P – Table accessibility**
- **2.1P – Using bootstrap**
- **2.2P – Calculator template**
- **2.3P – Template for website using bootstrap**
- **3.1P – String test application using VueJS**
- **3.2P – Unit look-up**
- **3.3C – BMI calculator**
- **3.4C – Cloud service registration application**
- **4.1P – Number guessing application**
- **5.1P – Status posting application**
- **5.2P – Menu list application**
- **5.3C – Unit information application using Vue-router**
- **6.1C – Registration application using Vuetify**
- **7.1P – Data retrieving using public API**
- **7.2P – Data retrieving from a text file**
- **8.1P – Unit lookup with pagination**
- **9.1P – Single page application**
- **10.1P – Single page application hosting in local host**
- **11.1P – Learning summery report**

## 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:

- 2.2P - the calculator app template that was implemented by using the bootstrap which is responsive between different screen sizes.
- 2.3P – cooperative web template that was implemented by using the bootstrap and placements for each element.

### ILO 2: Use Frameworks

*Use contemporary frameworks to create dynamic user interfaces.*

The below section demonstrates the ability in relation to the learning outcome which were build with using VueJs framework:

- 3.1P – application that renders custom messages
- 3.2P – Unit lookup in the given data set using the given sort and filter functions.
- 3.3C – BMI calculator using height and weight
- 3.4 – Registration cloud application

- 4.1P – number guessing application which has several methods such as give up, start over, generate number.
- 5.1P – status posting application which uses to post the status.
- 5.2P – creating a menu by calling the parent and child classes
- 5.3C – implemented the router into the look-up application.
- 6.1C – implementing a registration application using the given library files.
- 8.1P – using the paginate function to implement paginate to the unit look-up application.
- 9.1P – deploying a single page application with various components.
- 10.1P – deploying a single page application in local host with custom views and routers.

### **ILO 3: Develop User Interfaces**

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

- 2.2P - calculator application template that responds to the screen sizes.
- 2.3P – web template for a corporation which is scalable

### **ILO 4: Evaluate User Interfaces**

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

- 2.3P – implementation of the grid layout for web template.

## Reflection

### The most important things I learnt:

Throughout this unit, COS30010 Interface Design and Development, I've explored many key topics that have greatly improved my understanding of creating dynamic and user-friendly interfaces. Here are some of the main takeaways from my learning journey.

#### 1. Design Principles for Effective Interfaces:

Adhering to design principles and standards is crucial for crafting interfaces. This includes aesthetic aspects like layout, color, typography, and user-centered design approaches that ensure a seamless and intuitive user experience.

#### 2. Hands-On Experience with Development Tools:

Practical experience with contemporary frameworks such as Vue.js has been invaluable for building dynamic user interfaces. This hands-on approach has significantly enhanced my ability to create interactive and responsive user experiences.

#### 3. User-Centric Approach to Design:

Designing with the user in mind has been a key focus. Insights into user interface design patterns and techniques that prioritize usability and accessibility have made the end products more engaging and inclusive.

#### 4. Responsive Design and Cross-Platform Optimization:

Creating interfaces that adapt seamlessly to various devices and screen sizes has been a game-changer. Responsive design ensures users have a consistent experience across desktops, tablets, and smartphones.

#### 5. Usability and Accessibility Evaluation:

Evaluating user interfaces for usability and accessibility has been enlightening. Techniques for assessing ease of use and ensuring inclusivity have been a significant part of my learning journey.

#### 6. Exploring Single Page Applications (SPAs):

Single Page Applications (SPAs) dynamically update content without reloading the entire page, aligning with modern user expectations. This approach revolutionizes user experiences and enhances interactivity.

#### 7. Integration of External Services:

Learning to integrate external services via APIs has expanded my skill set. This capability enhances functionality and enriches user experiences in my projects.

#### 8. Portfolio Development and Practical Projects:

Building a portfolio through practical projects has reinforced my learning. These projects provide tangible examples of my skills, essential for showcasing to potential employers.

### I found the following topics particularly challenging:

In here, I found these topics were bit challenging:

- Using the templates in the Js: Implementing the templates in js module was a hectic problem in my view. It was bit annoying to solve the problems in there and I find it's the one that I struggled to deal with.

### I found the following topics particularly interesting:

In this unit, I found using Vue was so much interesting. Using the Vue and implementing new ideas and stuff was really interesting since we can interact with them in the same time. Having to watch how a plan getting implemented from top to bottom was a really wonderful sight to see.

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

- **Responsive Design:**  
Throughout the course, I showcased my adeptness in responsive design through various assignments. For instance, in Task 2.2P, I developed a responsive calculator application capable of adjusting its layout dynamically across different devices, indicating my grasp of responsive design principles. Similarly, Task 2.3 tasked me with crafting a website template for a corporate entity, emphasizing responsiveness for an optimal user experience across diverse screens. Furthermore, in my cocktail app project (Task 6.3HD), I meticulously ensured the app's functionality and visual appeal across various platforms, underscoring my proficiency in implementing responsive design.
- **API Integration:**  
Task 7.1P provided me with an opportunity to hone my skills in fetching data from a public API, which I later applied and expanded upon in my cocktail app development. Moreover, Task 7.2 demonstrated my versatility in integrating data from different sources by successfully extracting data from a text file.
- **Single Page Application:**  
In Task 9.1C, I laid the foundation for comprehending Single Page Applications (SPAs) by constructing a CRUD single-page application, gaining valuable insights into SPA mechanics. Additionally, Task 10.1P involved creating a single-page application using Vue-cli, further solidifying my understanding of this concept and enabling its practical application.
- **Client-Side Markup and Scripting Languages:**  
My proficient command of client-side markup (HTML) and scripting languages (JavaScript) empowered me to manipulate the Document Object Model (DOM), manage events, and create engaging interfaces. Throughout the course, I effectively applied these skills to enhance user experiences in various projects, highlighting my competence in client-side development.
- **Directives and Data Binding:**  
I attained proficiency in utilizing directives and data binding within frameworks like Vue.js, as evidenced by my assignments and projects. Through these tasks, I demonstrated the ability to dynamically update interface elements, reflecting a thorough understanding of these fundamental concepts. Overall, my accomplishments in assignments, projects, and practical applications of these topics underscore my confidence in effectively applying these skills in real-world scenarios.

### I still need to work on the following areas:

- **Backend Integration beyond Public APIs:** Although I've successfully integrated public APIs into my projects, I acknowledge that integrating with backend systems introduces unique complexities. To expand my expertise, I intend to undertake projects involving connections to backend databases and the creation of custom APIs. This will enhance my ability to construct comprehensive applications from end to end, broadening my skill set.
- Furthermore, since I haven't completed the HD tasks involving the creation of our own website with various components, I'm eager to pursue this as a personal project. This initiative will allow me to showcase my abilities independently and reference it as my own private project, thereby adding value to my portfolio.

### My progress in this unit was ...:

[comment on what happened on your progress, ]

My progress in the "Interface Design and Development" unit has been gratifying. From the start of the semester until now, I've seen substantial growth in understanding and applying critical concepts. I've actively engaged with the course content, participating in lectures, tutorials, and hands-on exercises. Topics like responsive design, API integration, and single-page applications captivated me, leading to dedicated exploration and practical application. The feedback from both my instructor and peers has been invaluable. It helped me refine my work and identify areas for improvement. This collaborative learning environment enhanced my understanding and allowed me to benefit from diverse perspectives. I'm particularly proud of the portfolio I've created, showcasing my skill progression over the semester. As the semester concludes, I'm excited to carry forward this newfound knowledge and expertise in my future work in interface design and development.

### This unit will help me in the future:

The "Interface Design and Development" course has been truly transformative, yielding concrete results. I'm excited to announce that I've landed an internship interview, all thanks to including my high-distinction project from this course on my resume. This accomplishment highlights the relevance and calibre of the skills I've acquired throughout the unit. While the final internship offer is still pending, I'm immensely grateful for the chance to take this course and learn from my dedicated instructor. The knowledge I've gained in interface design principles, responsive design, and API integration has significantly enriched my understanding and directly contributed to my professional aspirations. The fact that my project from this course has caught the attention of potential employers speaks volumes about the practicality and real-world applicability of the course content. It's truly gratifying to see how this course has positively influenced my career path in web development. I want to extend my sincere gratitude to my instructor and the course for equipping me with the skills that have led to this opportunity. Regardless of the outcome, I'm proud of my achievements thus far and eagerly anticipate continuing my journey in interface design and development with confidence and enthusiasm.

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

- If I had the chance to retake the "Interface Design and Development" unit, I would adjust my approach to learning based on the insights I've gained from my experience. Here's how I would do things differently:
- **Early Engagement with Complex Concepts:**  
I would actively involve myself in understanding complex concepts, like state management with Vuex, right from the start of the course. By dedicating more time to grasp and practice these challenging topics early on, I could improve my skills and better comprehend the subject matter from the beginning.
- **Consistent Practice with Backend Integration:**  
Recognizing the significance of backend integration, I would actively seek opportunities to engage in projects involving connections to backend databases and the creation of custom APIs. This hands-on practice would help me bridge the gap between theory and practical application, enhancing my understanding and skills in this area.
- **Utilizing Office Hours Effectively:**  
I would make better use of the lecturer's office hours by actively participating in discussions, seeking clarification on uncertainties, and requesting additional guidance when needed. This proactive approach would enable me to deepen my understanding and promptly address any challenges that arise.
- Implementing these adjustments would allow me to maximize the benefits of the course content, improve my skills more efficiently, and contribute effectively to both my academic journey and future career prospects in interface design and development.