COMP3850 Project Deliverable Certificate

Name of Deliverable	*Deliverable 2*
Date Submitted	*31 / 03 / 2022*
Project Group Number	*18*
Rubric stream being followed for this deliverable (highlight one) *Note: the feasibility study has the same rubric for all streams.*	*SOFTWARE Rubric* *GAMES Rubric* *CYBERSECURITY Rubric* *DATA SCIENCE Rubric*

We, the undersigned members of the above Project Group, collectively and individually certify that the above Project Deliverable, as submitted, **is entirely our own work**, other than where explicitly indicated in the deliverable documentation.

INITIALS	SURNAME	GIVEN NAME	STUDENT NUMBER	SIGNATURE (IN-PERSON OR DIGITAL)
EH	*Horvath*	*Erik*	*46042628*	
ST	*Torfeh Nejad*	*Sepehr*	*46042547*	
RS	*Shrestha*	*Rojwal*	*46137572*	
MI	*Ikeda*	*Marcus*	*45415064*	
LT	*Te*	*Lance*	*45581819*	

NB: please write all details clearly (if handwritten).

List of tasks completed for the deliverable and activities since last deliverable certificate with totals for each individual team member and whole team

Performed by *(Student Names)*	Duration *(hrs)*	Complexity *(L, M, H)*	Name of task	Checked by *(Initials)*
Lance Te	1	M	Researching the IEEE SRS standard	
	3	M	Writing the Scoping Document	ST
	2	M	Writing the Quality Manual	ST
	1	M	Proofread Deliverable 2	
	1	L	Formatting Deliverable 2	
	1.5	L	Sponsor meetings	
	3	L	Team meetings	
Total	12.5			
Sepehr Torfeh Nejad	1	M	Researching the IEEE SRS standard	
	3	M	Writing the Scoping Document	LT
	1.5	L	Sponsor meetings	
	3	L	Team meetings	
	7	M	Implementing server-side code	LT
	4	M	Implementing client-side code	LT
	0.5	M	Code documentation	LT
Total	20			
Erik Horvath	1	M	Research for project plan	
	2		Documentation	
	3.5	M	Writing Project plan	
	2	M	Writing Quality Manual	
	2	L	Sponsor & Team Meeting	
	2	M	Proofreading and editing	
Total	12.5			

Performed by *(Student Names)*	Duration *(hrs)*	Complexity *(L, M, H)*	Name of task	Checked by *(Initials)*
Marcus Ikeda	1	L	Research for project plan	
	2	M	Writing Project plan	
	1	M	Writing Quality Manual	
	3	L	Sponsor & Team Meeting	
Total	7			
Rojwal Shrestha	1	L	Research for project plan	
	0.5	L	Scheduling important dates	
	0.5	L	Making Gantt chart	
	1	L	Writing Project plan	
	1	L	Writing Quality Manual	
	3	L	Sponsor & Team Meeting	
Total	7			
Team Total	59			

Project Plan

FÆTHM

Lance Te, Sepehr Torfeh Nejad, Marcus Ikeda, Erik Horvath, Rojwal Shrestha

COMP3850 Sem 1, 2022 Deliverable 2

Contents

1. Introduction

Faethm AI is a SaaS based AI powered platform that uses extensive datasets to provide insightful information to professionals and their industry. The team at Faethm has partnered up with Macquarie University to provide the opportunity for students to gain valuable industry experience. The project tasked to us is to create a personalised landing page for a new user to improve their onboarding experience.

2. Statement of Purpose

This project plan is the formal documentation providing an elaborate overview of the management and execution of the project as a whole. It is an important reference tool for all parties involved including the developers (Macquarie University students) and stakeholders (Faethm team). The project plan provides information about the scope of the project as well as the technical and management strategies of the project. This plan should be the primary resource for confirmation on the strategy for managing the project.

Project areas defined in this project plan include:

- Risk management strategies including a risk matrix outlining the risk probabilities, consequences, and the potential impact of the associated risk
- Mitigation strategies to help avoid the risks or reduce the overall impact of the potential risk
- Management of the project resources including people, hardware software and other resources used in the project
- Organisation of the group members into roles and responsibilities
- Scheduling of all tasks and activities
- Identifying the products and documentation required for the project and justification for its purpose
- Software Development Life Cycle
- Gantt Chart with planned tasks, timelines, deliverables, and resource allocations for the project

3. Risk Management

It is important to mitigate the risk of undertaking a project by planning for potential risks that may occur. By following a risk matrix, we can assess the severity of a potential risk as well as how important it is to mitigate that risk.

	Neglible	Minor	Moderate	Significant	Severe
Very Likely	Medium	Medium	Medium/High	High	High
Likely	Low	Medium	Medium	Medium/High	High
Possible	Low	Medium	Medium	Medium/High	Medium/High
Unlikely	Low	Medium	Medium	Medium	Medium/High
Very Unlikely	Low	Low	Medium	Medium	Medium

Risk	**Description**	**Likelihood**	**Impact**
Impact to Current System	The project causes problems to the current system and as a result it no longer functions.	Unlikely	Significant
Loss of Data	The project does not run correctly and causes Faethm's data to be lost.	Very Unlikely	Severe
Changes to Requirements	Faethm changes project requirements creating more work that needs to be done	Possible	Minor
Team Unable to Complete Work	A member of the team is not able to complete their allocated work	Possible	Moderate
Project Incomplete	The project is not finished within the development period	Possible	Minor
Bugs in Software	Software has bugs during development	Very Likely	Negligible

Risk	**Mitigation Strategy**
Impact to Current System	The system should be reverted back to a state where it was previously functioning or a state from before the project was started.
Loss of Data	Data should be backed up before running the software.
Changes to Requirements	Maintain good organisation and communication with Faethm.
Team Unable to Complete Work	Maintain good communication between team members and have someone else take over their work.
Project Incomplete	N/A.
Bugs in Software	Debugging.

4. Resource Management

The resources required for the successful execution of the project are outlined here. The main resources are broken down into three categories: people, hardware and software. Since this is a software development project with the Faethm AI application being a SaaS hosted platform, the need for physical resources such as material goods and capital expenses is eliminated. Further elaboration on the three project resources is provided below.

4.1. People

This resource consists of two categories including the developers and the Faethm team. The developers are the 5 members from COMP3850 Group 18:

- Lance Te
- Erik Horvath
- Sepher Torfeh Nejad
- Marcus Ikeda
- Rojwal Shrestha

The Faethm team is primarily involved to provide guidance and support for the development team. Since they are the primary stakeholders as well as providing us access to speak with members from their development team, they are both a technical and strategic, high level, resource.

4.2. Software

The Onboarding UI project will be built using the MERN (MongoDB, Express, React, Node) stack for ease of integration with the rest of the Faethm application. The different layers of the UI will be developed using technologies across the MERN stack:

- Frontend: React.js
- Server: Express.js, Node.js
- Database: MongoDB

4.3. Hardware

All members require their own computer set up with access to the internet to be able to contribute to the project.

5. Team Organisation

The members of COMP3850 Group 18 are broken up into specific roles to take advantage of team members strengths and create a clear delegation of duties. The following is a list of each member and their project role:

- **Lance Te:** Team Lead, Lead Formatter, Developer, Documentation Support
- **Sepher Torfeh Nejad:** Lead Developer, Documentation Support
- **Erik Horvath:** Editor, Documentation Officer, Developer
- **Marcus Ikeda:** Documentation Officer, Developer
- **Rojwal Shrestha:** Documentation Officer, Developer

These roles are distributed based on the agreed skillsets of the group members. The roles have clearly defined duties and the role descriptions outlined below:

- Team Lead: Main point of contact, in charge of all deliverables and project component submissions, organising group meetings and general team leader duties.
- Lead Formatter: Responsible for compiling all group contributions of deliverables and formatting documentation for presentation purposes.
- Lead Developer: Most experienced developer with ability to delegate tasks and advise other developers.
- Lead Editor: Looks for misspellings, incorrect grammar, missed punctuations, inconsistencies and general flow of the text.
- Documentation Officer: Responsible for creating the documentation and fill in all required information needed to satisfy deliverables.
- Developer: Responsible for the coding and development of the project.
- Documentation Support: Provide support to Documentation Officers with technical documentation requirements.

6. Project Schedule

ID	Task Name	Product	Duration	Start	Finish
1	Deliverable 01	Feasibility Study	7 days	Wed 3/2/22	Thu 3/10/22
2	Deliverable 02	Project Plan and Requirements/Scoping Document	12 days	Wed 3/16/22	Thu 3/31/22
2.1	Activity 01	Project Plan for Deliverable 2	4 days	Wed 3/23/22	Sun 3/27/22
2.3	Activity 02	Scoping Doc for Deliverable 2	7 days	Wed 3/16/22	Thu 3/24/22
2.4	Activity 03	Quality Manual for Deliverable 2	5 days	Sun 3/27/22	Thu 3/31/22
3	Deliverable 03	Update Deliverable 2, Prototype/MVP, Design, Test Cases	17 days	Wed 4/6/22	Thu 4/28/22
4	Deliverable 04	Update Deliverable 2, User/Training Manual	12 days	Wed 5/4/22	Thu 5/19/22
5	Deliverable 05	Final Group Reflective Report	12 days	Wed 5/18/22	Thu 6/2/22
6	Deliverable 06	Project Presentation/Demonstration	12 days	Wed 5/18/22	Thu 6/2/22
7	Deliverable 07	Final Web Application Delivery	11 days	Wed 5/18/22	Wed 6/1/22
8	Deliverable 08	Final Exam	1 day	Tue 6/7/22	Tue 6/7/22
9	Checkpoint 01	Individual Contribution Form Submission (First Half)	4 days	Wed 3/30/22	Mon 4/4/22
10	Checkpoint 02	Individual Contribution Form Submission (First Half)	4 days	Wed 6/1/22	Sat 6/4/22
11	Functional Requirement 01	Login (FR1)	11 days	Wed 4/6/22	Wed 4/20/22
11.1	Activity 04	FR1 Login Functionality	4 days	Wed 4/6/22	Sat 4/9/22
11.2	Activity 05	FR1 Error/Unsuccessful Login Handling	4 days	Sat 4/9/22	Wed 4/13/22

11.3	Activity 06	FR1 Questionnaire Display	4 days	Wed 4/13/22	Sat 4/16/22
11.4	Activity 07	Testing for FR1	3 days	Sat 4/16/22	Tue 4/19/22
12	Functional Requirement 02	User Persona (FR2)	11 days	Wed 4/20/22	Wed 5/4/22
12.1	Activity 08	FR2 Persona Classification	4 days	Wed 4/20/22	Sat 4/23/22
12.2	Activity 09	FR2 Pre-defined Persona Display	3 days	Sat 4/23/22	Tue 4/26/22
12.3	Activity 10	FR2 User Input Capture Functionality	3 days	Tue 4/26/22	Thu 4/28/22
12.4	Activity 11	FR2 Store User Input Functionality	3 days	Thu 4/28/22	Mon 5/2/22
12.5	Activity 12	Testing for FR2	2 days	Mon 5/2/22	Tue 5/3/22
13	Functional Requirement 03	Use Case (FR3)	5 days	Wed 5/4/22	Tue 5/10/22
13.1	Activity 13	FR3 User's Use Case Determination from Answers/From FR2	4 days	Wed 5/4/22	Sat 5/7/22
13.2	Activity 14	Testing for FR3	3 days	Sat 5/7/22	Tue 5/10/22
14	Functional Requirement 04	Personalisation (FR4)	9 days	Sun 5/8/22	Wed 5/18/22
14.1	Activity 15	FR4 Welcome Functionality	4 days	Sun 5/8/22	Wed 5/11/22
14.2	Activity 16	FR4 Relevant Features Display	5 days	Wed 5/11/22	Tue 5/17/22
14.3	Activity 17	Testing for FR4	3 days	Sat 5/14/22	Tue 5/17/22
15	Activity 18	Testing For the Entire Web Application	10 days	Wed 5/18/22	Tue 5/31/22

6.1. Task / Activities / Phases

In order to deliver the project on time and to balance the workload amongst the team members, the project can be divided into tasks and activities.

1. **Deliverable 01**
   Product: Feasibility Study
   Summary: The task is to write an official document regarding the practicality of the project based the team's capability and experience as well as the project functional requirements
2. **Deliverable 02**
   Product: Project Plan, Scoping Document and Quality Manual
   This deliverable is divided in to 3 activities:
   2.1. **Activity 01:** Project Plan
      Summary: Write a document specifying risk and resource management also including the project schedule
      Participants: Erik, Marcus, Roj
   2.2. **Activity 02:** Quality Manual
      Summary: Write a document showing how quality is assessed and maintained throughout the project
      Participants: All Members
   2.3. **Activity 03:** Scoping Document
      Summary: Write a document providing an overview of the context and functionality of the project
      Participants: Sepehr, Lance
3. **Deliverable 03**
   Product:
      - Revised Project Plan, Quality Manual, Scoping Document
      - Analysis and Design Document
      - Testing Document
      - Prototype/MVP

   Summary: The task is to update the previously written document according to the new developments in the project. The Project Plan, Quality Manual and Scoping Document will be revised in a manner similar to Deliverable 2. The workload for Analysis & Design and Testing Document is yet to be decided.

4. **Deliverable 04**
   Product: Revised Project Plan, Quality Manual, Scoping Document along with a User Manual
   Summary: The task is to update the previously written document according to the new developments in the project. The Project Plan, Quality Manual and Scoping Document will be revised in a manner similar to Deliverable 2. The workload for User Manual is yet to be decided.
   Participants: All Members
5. **Deliverable 05**
   Product: Final Group Reflective Report
   Summary: a document reviewing all aspects of the project
   Participants: All Members

6. **Deliverable 06**
   Product: Project Presentation/Demonstration
   Summary: the group will present their system to the sponsors, academics and students
   Participants: All Members
7. **Deliverable 07**
   Product: Final Group Reflective Report
   Summary: a document reviewing all aspects of the project
   Participants: All Members
8. **Deliverable 08**
   Product: Final Exam
9. **Checkpoint 01**
   Product: Individual Contribution Form (First Half)
   Summary: each member is required to fill out a form assessing other member's contributions in the project
   Participants: All Members
10. **Checkpoint 02**
    Product: Individual Contribution Form (Second Half)
    Summary: each member is required to fill out a form assessing other member's contributions in the project
    Participants: All Members
11. **Functional Requirement 01**
    Product: Login (FR1)
    Summary: this functional requirement ensures only registered and authenticated users are allowed onto the application.
    Participants: All Members
    The task is split into activities focusing on fundamental aspects of the requirement and testing.
    11.1.1. Activity 04: FR1 Login Functionality
    11.1.2. Activity 05: FR1 Error/Unsuccessful Login Handling
    11.1.3. Activity 06: FR1 Questionnaire Display
    11.1.4. Activity 07: Testing for FR1
12. **Functional Requirement 02**
    Product: User Persona (FR2)
    Summary: this functional requirement classifies users into persona in order to assist the app tailor its offerings according to the user's needs
    Participants: All Members
    The task is similarly split into activities focusing on fundamental aspects of the requirement and testing.
    12.1.1. Activity 08: FR2 Persona Classification
    12.1.2. Activity 09: FR2 Pre-defined Persona Display
    12.1.3. Activity 10: FR2 User Input Capture Functionality
    12.1.4. Activity 11: FR2 Store User Input Functionality
    12.1.5. Activity 12: Testing for FR2

13. **Functional Requirement 03**

    Product: Use Case (FR3)

    Summary: this functional requirement determines a user's use case

    Participants: All Members

    The task is similarly split into activities focusing on fundamental aspects of the requirement and testing.

    13.1.1. Activity 13: FR3 User's Use Case Determination from Answers/From FR2

    13.1.2. Activity 14: Testing for FR3

14. **Functional Requirement 04**

    Product: Personalisation (FR4)

    Summary: this functional requirement will display a personalised landing page to the user

    Participants: All Members

    The task is similarly split into activities focusing on fundamental aspects of the requirement and testing.

    14.1.1. Activity 15: FR4 Welcome Functionality

    14.1.2. Activity 16:FR4 Relevant Features Display

    14.1.3. Activity 17: Testing for FR4

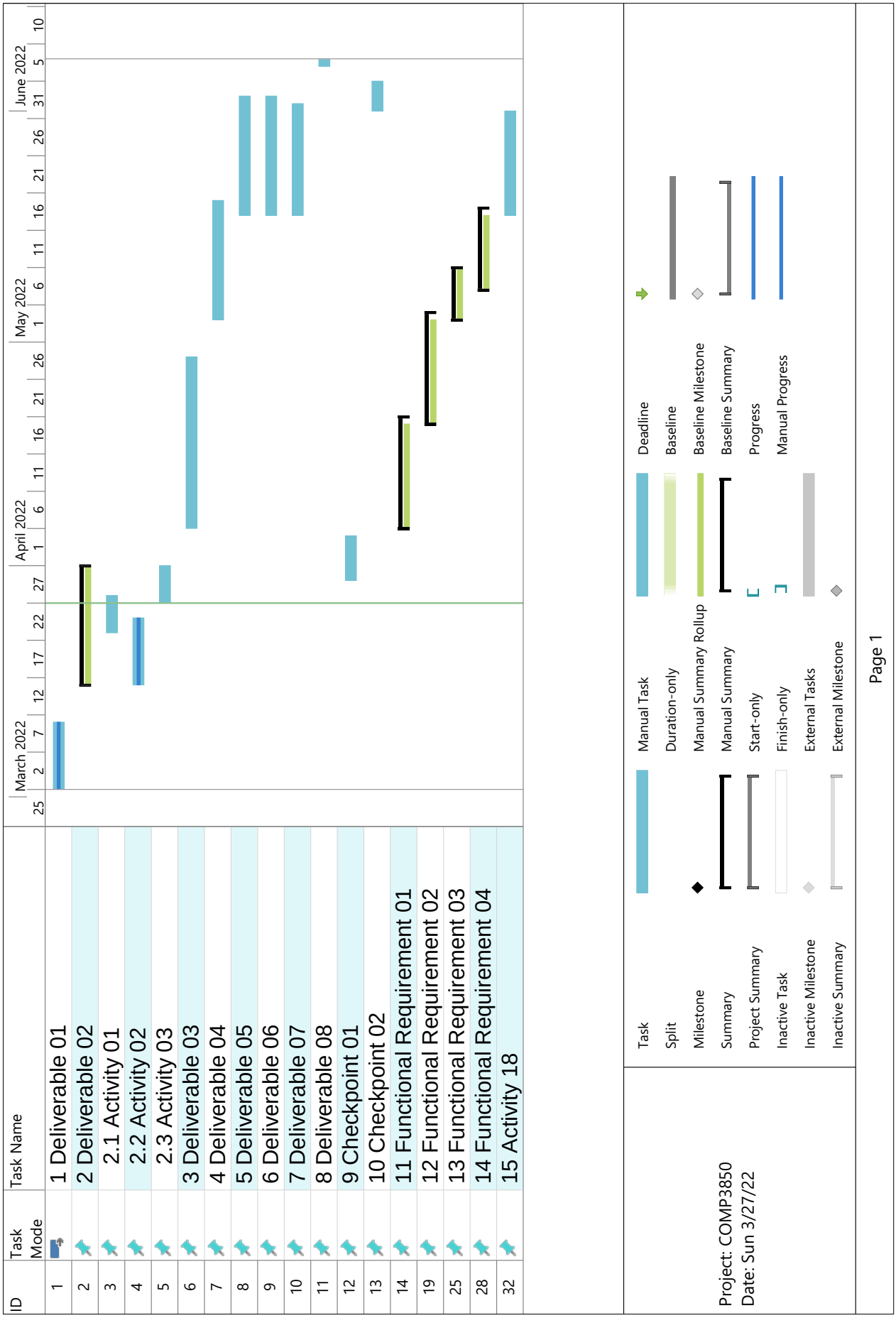
15. **Final Testing**

    Product: Testing for the Entire Web Application

    Summary: after all Functional Requirement are completed and tested, all modules will be integrated and tested to deliver a satisfactory product

    Participants: All Members

6.2. Timeline


ID
Task Mode
Task Name
1 Deliverable 01
2 Deliverable 02
2.1 Activity 01
2.2 Activity 02
2.3 Activity 03
3 Deliverable 03
4 Deliverable 04
5 Deliverable 05
6 Deliverable 06
7 Deliverable 07
8 Deliverable 08
9 Checkpoint 01
10 Checkpoint 02
11 Functional Requirement 01
12 Functional Requirement 02
13 Functional Requirement 03
14 Functional Requirement 04
15 Activity 18
March 2022
April 2022
May 2022
June 2022
Project: COMP3850
Date: Sun 3/27/22
Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Baseline
Baseline Milestone
Baseline Summary
Progress
Manual Progress
Page 1

6.3. Resources Allocated

The resources we have been allocated for this project can be categorised as personnel, hardware and software. The personnel resources that we have been allocated consists of all the individuals that are assigned to the project. This includes each of the group members that are working on the project, as well as any technical skills that each group member has, and the representatives that have been sent by Faethm to give us feedback and advice on the project. The hardware resources we have is any hardware resources that is owned by the group, i.e. laptops/computers and any hardware resources that we have permission to use from Macquarie University or Faethm. Since we are developing an online platform, we have mostly been allocated software resources by Faethm for development. Faethm has given us their website and their component library to use for development, and a Figma document where they have compiled their UI conventions as well as the personas for the user profiles that we need to categorise. Faethm has also compiled resources for us containing the basics of the software that we will be using to develop the project in (JavaScript, Typescript, ReactJS, NodeJS). We have also been provided with some of Faethm's insights, where they break down all the features of their platform and some diagrams explaining the workflow of the processes that are currently in place and have been planned.

7. Process Model

The process model that we are using for this project is agile project management. The agile method allows for Faethm to maintain more control over the project because they are more easily able to make changes to the software requirements. It will also allow them to provide input at regular intervals since the work is completed in a continuous stream and not all at once. This means that they will be able to provide feedback on completed work and request changes or additional features if necessary. The agile method is the ideal method for this project because it has the lowest chance of having the project fail due to the way that work is constantly being done over the development period, which as a result will make the progress of the project predictable. The software will continuously be improved during the entire development period with features and changes being made at the request of Faethm, which allows the project to maintain flexibility on the work that needs to be done and the features that need to be implemented for the project to be successful. This agile method also suits the project because the work that needs to be done is not confirmed and may be easily changed so any work that is done can be modified or built upon as development continues.

8. Documentation

The documentation required for this project include:

1. **Feasibility Study:** Discusses the viability of the project, what the nature of the problem is and what needs to be done to address the current situations. Possible solutions for the problem are addressed here and we determine what we need to do to make the project successful.
2. **Project Plan:** Addresses the organisation of the project i.e. Potential risks that could potentially prevent the project from succeeding, the tasks that need to be completed for the project to be successful and how the projects resources will be allocated to ensure the project runs smoothly. A timeline is also given to outline the progression of development. This will need to be updated if the requirements of the project change.
3. **Project Requirements & Scoping Document:** Goes over the purpose of the software and an overview of how it will function. This includes documentation of how the software will work as well as an overview of all of the product's functions. The design restrictions and constraints are also discussed in this document. The functional requirements can be updated throughout development if the need to change the project requirements comes up.
4. **Analysis Document:** Contains a case diagram showing the actors and use cases and the relationships between them. There should be a case diagram for each piece of functionality in the system.
5. **Design Document:** Contains the basic architecture of the system, explaining how processes in the system will be handled as well as explaining the design choices with justifications and trade-offs.
6. **Testing Documentation:** Contains plans for testing strategy, testing types, testing schedule, testing tools and resources assigned, testing milestones and test deliverables. This document should cover all the testing processes used.
7. **User Manual:** Contains documentation for users who are unfamiliar with the software. It should allow a moderately computer-literate user to fully utilise the software's functionality. Contents of the document should contain information that will benefit the user such as an installation guide, configuration settings, screenshots with example data, training, troubleshooting help etc.

9. Assumptions

This project plan was made under the assumptions that:

- We will be able to maintain contact with the representatives from Faethm for the duration of the project
- Faethm will provide us with the appropriate resources to complete the project.
- All group members have access to appropriate hardware and software to complete the project.
- The project's requirements can be changed by Faethm at any point in the project if it is required.

Quality Manual

FÆTHM

Lance Te, Sepehr Torfeh Nejad, Marcus Ikeda, Erik Horvath, Rojwal Shrestha

COMP3850 Sem 1, 2022 Deliverable 2

Contents

1. Quality Control and Management

This quality manual details the quality control procedures that we will undergo during the development of this project. The purpose of this document is to ensure that the quality of the product we are developing meets the requirements laid out by Faethm. By following proper quality control procedures and correctly documenting them, we can ensure that the software that we develop will be able to perform the tasks that are needed. This document should serve as a guideline for the procedures that need to be followed to maintain a high standard of quality within the project.

Software quality assurance is responsible for assuring that the product that we are developing meets the requirements set out by Faethm since it defines the adequacy of the software development process we are using. Quality assurance covers everything throughout the entire development process. It is important since it identifies problems that occur within the software development process and ensures that the end product is competitive and performs the function that it is intended to do. Having good quality assurance ensures that the project can be completed without problems.

2. Reviews and Audits, Testing, Tools

2.1. Reviews and Audits

Complete and relevant documentation of all stages of the project is required to ensure the successful completion of the deliverables and the final project. Before documentation or code is submitted it must first be approved by the relevant project leader. The following review steps must be completed before the official submission of any deliverable.

1. Team member reviews own work making effort to remove inconsistencies or mistakes
2. Lead Developer or Documentations Lead approves the team members work and adds to the submission document or code.
3. Editor reviews for any grammatical errors, spelling errors or other inconsistencies.
4. Deliverables are presented to the Faethm AI team for review.
5. If there are no changes to make, the Team leader submits work to iLearn.

2.2. Testing

Throughout the development phase of the project, the UI will be subjected to various tests to ensure any potential bugs are identified and addressed before it goes live. These tests are broken down into six umbrella categories that, together, comprehensively covers the UI's design and performance.

Test	**Purpose**
Functionality	Ensures that the UI meets the functional requirements as outlined in the Software Requirements Specification (SRS) document. Additionally, this involves testing all other elements including links, forms, and cookies and tokens.
Usability / Compatibility	Ensures that the UI is intuitive, user-friendly, and mobile-friendly. This involves testing the navigation and appearance of the UI on devices with varying screen sizes.
Interface	Ensures the application, web server and database server are operating as expected. This involves: • Testing requests sent by the application and displaying appropriate error messages. • Testing requests are received and processed by the web server. • Testing queries sent to the database.
Database	Ensures data integrity and the database maintains ACID properties. This involves testing all possible queries sent to the database to check if it provides the expected results or displays appropriate errors.
Performance	Ensures the UI will continue operating under heavy loads. This involves testing the UI load times at different connection speeds and other general stress testing measures.
Security	Ensures that both system and user data is not compromised. This involves testing user access to various workspaces in the UI.

2.3. Tools

A project of this scale requires constant monitoring and assessment of changes made to the official documentation and source code. The process for ensuring quality of our work is not fully automated, we observe the changes with the assistance of technologies built-in to the software.

Any changes made or new section added to the official documentation has to be approved by the lead editor of the team, then with help of built-in formatting and grammar correction features we verify if the changes are up to a certain standard.

Whereas, new code or any change to the existing source code has to be done in the dev branch of our GitHub repository. When the changes are committed and pushed to the origin, the lead developer of the team tests the new lines of code to check if it's operational. Syntax-errors are easily remediated with the help of syntax checkers present in modern IDEs. Only then the changes are pushed onto the main branch.

The tools we use to ensure quality in our project are listed as follows:

- GitHub – Version control
- Google Docs – Documentation
- Microsoft Word – Documentation
- VSCode – IDE, syntax
- Various browsers – Testing
- Mobile devices – Testing

3. Tracking / Change Management and Tools

The development of the Onboarding UI will span from 13 to 16 weeks. It is important that both the stakeholders (Faethm, Macquarie University) and developers (Techpad Technologies) know what work has been completed, needs to be completed, and the associated resources used at any given point in the project life cycle. This allows issues to be more easily identified and ensures transparency for all parties throughout the process.

The following processes and technologies are used in combination to form a comprehensive tracking management system:

Process / Tech	**Scope**	**Purpose**
GitHub	Faethm Internal	GitHub offers a version control feature which will be used for tracking changes in our code.
Google Docs	Internal	Google Doc offers a version control feature which will be used for tracking changes in our reports.
Gantt chart	Internal External	Provides an overview of tasks, allocated resources, deadlines and milestones throughout the project life cycle.
Microsoft planner	Internal	Provides an interactive dashboard that gives team members an overview of which tasks are assigned to who, tasks to be completed, and tasks that have been completed. Additionally, it has been set up to send email reminders when deadlines are approaching for any given task.
Team meetings	Internal	Weekly team meetings provide members the opportunity to discuss tasks they have completed in the past week and what needs to be completed in the coming week.
Sponsor meetings	Faethm Internal	Weekly sponsor meetings provide the team the opportunity to outline the progress and trajectory of project tasks for the past week and coming week, respectively, with the Faethm team.
iLearn posts	Internal MQ Uni	Weekly iLearn posts provide Macquarie University with snapshots of the team's progress on the project.

4. Communication

The team will maintain a consistent level of communication both internally and externally to ensure all stakeholders remain involved and up-to-date throughout the project life cycle.

There are three core stakeholders involved in this project: Techpad Technology developers, Faethm, and Macquarie University. The varying communication requirements for each stakeholder has been considered and accommodated for.

In adopting an agile framework according to the *Manifesto for Agile Software Development*, the team welcomes changing requirements, and highly values face-to-face communication. Thus, due to the evolving nature of the project, effective communication is both necessary for the project's progression and crucial to the quality management process.

The following modes of communication are designed to cater to each stakeholder's requirements:

Stakeholder	**Communication**
Faethm	The primary method of communication involves a weekly Zoom meeting between the Faethm and Techpad Technology teams. These meetings are scheduled for every Wednesday at 4-4:30pm AEDT. Additionally, the Faethm team set up a Slack channel to provide greater access and communication between both teams.
Techpad Technology Devs	The primary method of communication involves a weekly Zoom meeting prior to, and after weekly meetings with the Faethm team. These meetings are scheduled for every Wednesday at 3:30-4pm and 4:30-5:30pm. An internal meeting prior, allows the team to organise the questions, discussions, and material to be shown in the sponsor meeting. This ensures time is used productively and uncertainties clarified effectively. An internal meeting post sponsor meeting gives the team a chance to talk over what was discussed in the sponsor meeting, and set goals for the week ahead.
Macquarie University	The primary method of communication involves weekly iLearn posts. The team has scheduled these posts to be delivered every Sunday evening for consistency and convenience.

5. Conflict Resolution / Negotiation

Although preferably avoided, it is often inevitable that conflicts arise within a team environment, especially when there are important deadlines and allocations of different tasks required for the successful completion of a project. In order to minimise the frequency and severity of internal conflicts, we have put in place a procedure for dealing with them based on the Agile Framework. Project conflicts are broken down into 5 levels of conflict:

- **Agile conflict Level 1:** The team identifies a problem arising and then discusses are shares opinions about the issue with the team and with the team leader in a constructive manner.
- **Agile conflict Level 2:** The matter has now developed into a disagreement among team members and team members are no longer taking initiative to help resolve the conflict.
- **Agile conflict Level 3:** Multiple problems are occurring causing divisions in the team with all members siding strongly with one side or the other. Winning the conflict has become more important than compromising.
- **Agile conflict Level 4:** Group members are certain that it is impossible to change the other group and must therefore be removed from the group.
- **Agile conflict Level 5:** All split group members are no longer interested in solutions and wish merely the destruction of the project.

The team has acknowledged these stages of conflict and agreed to always prioritise keeping the conflict level as low as possible at all times and to avoid deteriorating to a higher conflict level. On top of understanding the 5 levels of Agile conflicts we have derived our own step by step escalation procedure for dealing with internal conflicts between members:

- **Inform and compromise:** Any team member noticing a potential conflict arising must inform the other member involved and attempt to resolve the dispute privately using a sympathetic and progressive approach.
- **Team meeting:** If stage one is unsuccessful then the issue must be escalated to the team leader who will arrange for a team wide meeting to discuss the issue and come together to reach a solution
- **Tribunal Decision:** Should the conflict still be unresolved for all team members then the issue must be escalated further to the unit coordinator for ruling on how to resolve the issue.

6. Standards / Templates / Appendices / Forms

The project plan and quality manual were developed using ISO/IEC/IEEE standards to establish compliance and proper methodologies.

- ISO/IEC/IEEE 24748-1:2018, Systems and software engineering - Life cycle management - Part 1: Guidelines for life cycle management
- ISO/IEC/IEEE 24748-5:2017, Systems and software engineering - Life cycle management - Part 5: Software development planning
- Manifesto for Agile Software Development

Scoping Document

FÆTHM

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COMP3850 Sem 1, 2022 Deliverable 2

Contents

1. Introduction

Faethm is a data driven, AI incorporated analytic company which provides a number of services on their platform for their users. They have partnered with Macquarie University to provide industry experience opportunities for students. Their aim is to develop a personalised landing page to provide new users a better onboarding experience when using the Faethm application for the first time.

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) is to provide an overview of both the context and functionality of the Onboarding UI for the Faethm application.

This document serves as a medium between stakeholders (Faethm) and developers (Techpad Technology) to discuss and clarify the functionalities of the Onboarding UI to ensure both parties' expectations are met before any development begins. Given the preliminary nature of this document, both parties can make agreed changes throughout.

Once the development phase commences, the SRS document will then serve as a reference for the developer team to follow and stay on track while developing the Onboarding UI.

Thus, the SRS must be a collaborative effort between stakeholders and developers to produce a well-defined, clear and completely understood document.

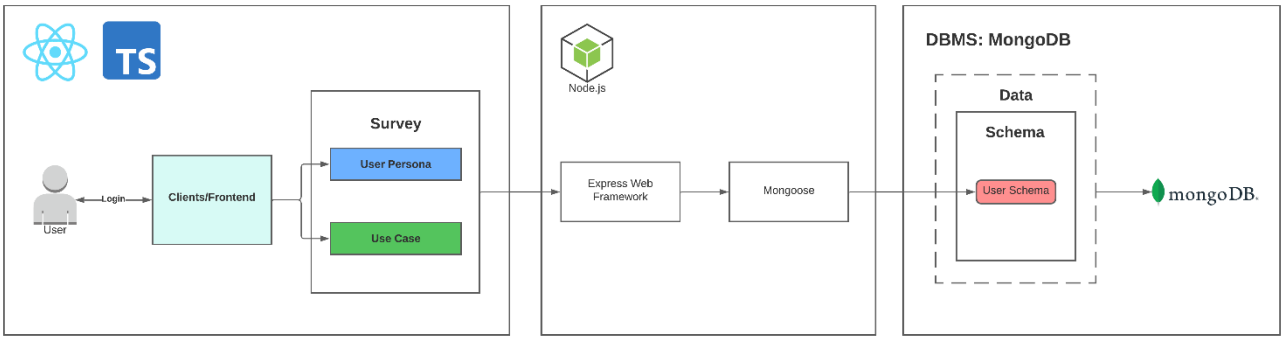
1.2 Scope

The Onboarding UI project is an additional data driven step for First Time User (FTU) which provides users with the opportunity to customise their experience on the Faethm application. The UI provides a tailored landing page for users and improves the user experience (UX) on the Faethm platform. The UI is a Single Page Web Application (SPA), with MERN framework (ReactJS, NodeJS, MongoDB) which may later be integrated with the Faethm web application.

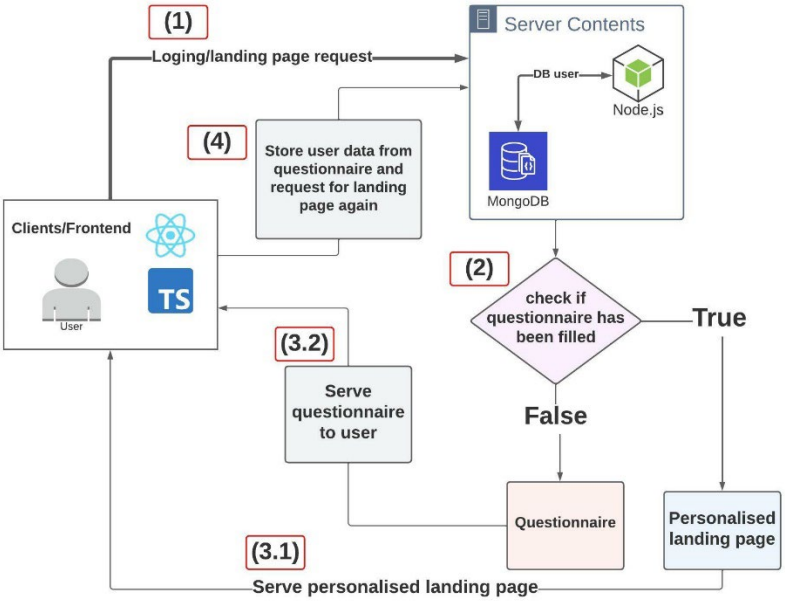
Comprising the first-time user experience (FTUE), the Onboarding UI is only applicable to users logging in for the first time. The UI **will** check if the user has previously logged in. For first time users, the UI serves a short set of questions. This data is stored for future reference and used to assign users a predefined persona and determine the most relevant services available on the platform to them. Ultimately, this enables the UI to provide a personalised landing page. The UI **will not** serve the short set of questions to users that have previously logged in. Instead, their personalised landing page will be served directly.

The Faethm platform offers a number of different services and they seek to enhance the overall user experience. By providing a personalised landing page, the Onboarding UI streamlines the user experience, offers Faethm greater insight into their user, and offers potential avenues for the development of future products.

1.2.1. Data Flow Diagram



1.2.2. Logic Flow Diagram



1.3 Definitions, Acronyms, and Abbreviations

Acronyms/Abbreviations	Definitions
SPA	Single Page Web Application
API	Application Programming Interface
AI	Artificial Intelligence
UI	User Interface
UX	User Experience
SRS	Software Requirement Specification
CSRF	Cross-Site Request Forgery
FTUE	First Time User Experience

1.4 References

Systems and software engineering – Life cycle processes – Requirements engineering (ISO/IEC/IEEE 291448, 2011). Obtained from: https://login.simsrad.net.ocs.mq.edu.au/login?qurl=https://ieeexplore.ieee.org%2fdocument%2f6146379

1.5 Overview / Document Convention / Intended Audience

1.5.1. Overview

In this document, product perspective and functions are described. It also contains user characteristics and the operating environment of the application.

Functional requirements of the UI, design and implementations requirements and usability of the application are included.

1.5.2. Intended Audience

Stakeholders (Faethm) and developers (Techpad Technology) are the intended audience of this document. It aims to inform the developers and the stakeholders of the purpose of this project and clarifies the requirements of the application for both parties.

2. Overall Description

2.1 Product Perspective

Our Onboarding UI will serve as the First Time User Experience (FTUE). This will be the first page a user interacts with upon logging into the Faethm application for the first time.

While we develop this feature, the interface will remain **independent** of the rest of the Faethm app. When implemented into the Faethm app, the interface will sit just behind the login screen and provide users with direct access to the tools and articles most relevant to their use case.

2.2 Product Functions

Our Onboarding UI will provide users with a personalised dashboard that caters to their needs and what they hope to gain out of the app. The UI offers two core functionalities:

- To determine the persona of a user (refer to *User Classes and Characteristics*)
- To determine a user's use case

By determining these from the user, the UI will provide the appropriate insights (workforce, technology, job) and articles that will align with their use case.

2.3 User Classes and Characteristics

There are two user classes that will interact with the Onboarding UI: Faethm developers and users.

2.3.1. Faethm Developers

The interaction of Faethm developers with the Onboarding UI will involve maintaining and updating the UI to meet their user's evolving needs. This could include updating personas to reflect changes in the type of employees in the corporate structure to general maintenance of the UI.

2.3.2. Users

Users will make up the primary group interacting with the Onboarding UI. They will answer a short set of questions the first time they login. This is used to classify users into one of nine broadly generalised personas based on their occupation and position within their company. These personas are:

1. Concerned executive
2. Head of the division
3. Data loving analyst
4. Overbooked manager
5. Lost employee
6. Learning manager
7. Workforce planner
8. Generalist HR manager
9. Automation engineer

Each type of user has varying levels of technical expertise. This is a strong consideration for the product's design requirements to ensure the UI is intuitive across all user types.

2.4 Operating Environment

Within the context of users, the Onboarding UI will operate through their web browser whether that be on a laptop or mobile device. This requires the UI, as with any modern UI, to be able to adapt to different screen sizes and aspect ratios.

Within the context of the Faethm developers, the Onboarding UI should operate and will thus be built using the MERN (MongoDB, Express, React, Node) stack for ease of integration with the rest of the Faethm application. The different layers of the UI will be developed using technologies across the MERN stack:

- Frontend: React.js
- Server: Express.js, Node.js
- Database: MongoDB

The frontend provides a short set of questions to determine their persona and use case. From there, the UI will display personalised content derived from a user's categorisation from the initial questionnaire. The server will handle requests from the frontend and serve the initial page to the user's browser. The database stores user information which includes their answers to the set of questions and the persona they are classified as.

2.5 User Documentation

2.5.1. Faethm Developers

Documentation of software features, and a map of the code will be provided to the Faethm developers to ensure a smooth handover.

2.5.2. Users

A help hint / tooltip will provide sufficient information for users to interact with the Onboarding UI.

3. Requirements

3.1 Functional Requirements

3.1.1. FR1 – Login

The login feature will serve as a barrier to ensure only registered and authenticated users are allowed entry into the Faethm application.

- The system shall display the login form.
- The system shall display an error message on unsuccessful login.
- The system shall display a short set of questions upon successful login.

3.1.2. FR2 – User Persona

Classifying the user into a persona will assist the Faethm app to customise its offerings to better suit the needs of the user.

- The system shall classify users into one of nine persona classes.
- The system shall provide a user form displaying the nine pre-defined personas with an icon graphic and short description for each.
- The system shall capture user input, and store that information in the database.

3.1.3. FR3 – Use Case

Determining a user's use case will assist the Faethm app to customise its offerings to cater more specifically to user needs.

- The system shall provide a short set of questions each with a set of possible answers.
- The system shall determine the user's use case derived from their answers from these questions.

3.1.4. FR4 – Personalisation

The system shall use FR1 and FR2 to display a personalised landing page to the user.

- The system shall provide a welcome message customised with the user's name and organisation.
- The system shall provide tools relevant to the user.
- The system shall provide articles relevant to the user.

3.2 Design and Implementation Requirements / Constraints

3.2.1. Time

Currently, the team is balancing part- or full-time work alongside this project. This was an important consideration when proposing a realistic timeframe. Ultimately, it was agreed that a reasonable timeframe to develop the documentation and final deliverable for the Onboarding UI ranges from 13 weeks to a maximum of 16 weeks. A breakdown of the deliverable's timeline is outlined under 'Project Schedule' in the Project Plan.

3.2.2. Cost

The development of the Onboard UI is an unpaid endeavour and thus there are no cost constraints applicable.

3.2.3. Technical

There are two technical considerations for the Onboarding UI.

1. The Faethm application adheres to a distinct style throughout which is clearly defined in their CSS. Thus, the Onboarding UI must continue to maintain a **consistent UI**.
2. The Faethm application was developed using the MERN stack. Thus, the Onboarding UI must be developed in the **MERN stack** to ensure integration compatibility.

3.3 Usability Requirements

3.3.1. Accessibility

The Onboarding UI should:

- Offer a responsive design to serve users a consistent experience whether they are accessing the UI on a mobile device or laptop.
- Be browser-neutral to ensure users are not limited to interacting with the UI on certain web browsers.

3.3.2. Efficiency

The Onboarding UI should maintain reasonable load times for efficiency, and to improve the user experience.

- The frontend should make minimal requests to the server and have clear logic.
- The server should be well structured and have a well-defined API.

3.3.3. Intuitiveness

The Onboarding UI should:

- Be user-friendly, that is, easy to learn and navigate. Additional help hints or tooltips may be implemented to increase user-friendliness.
- Provide a low perceived workload to ensure a smooth learning experience while interacting with the UI.

3.4 Other Non-functional Requirements

3.4.1. Performance

- Support lower end devices
    - Devices accessing the Onboarding UI should be JavaScript supported due to the nature of the software (React).
    - The Onboarding UI shall be a relatively lightweight software so it can be accessed by lower end devices.
- Support slower internet connections
    - The Onboarding UI shall minimise the required API request by implementing clear and well-thought-out frontend logic to ensure a consistently smooth experience despite a slower internet connection.
- Support an increasing numbers of simultaneous users
    - The Onboarding UI shall be hosted on a server with appropriate infrastructure to support a growing user base.
    - Load-balancing and intelligent scheduling algorithm is required during peak time.
- Instantaneous load times
    - The frontend React components shall be optimised to avoid long initial loading times of the UI.

3.4.2. Security

- Authentication
    - The Onboarding UI shall only allow registered users who provide the correct login credentials into the application.
    - The Onboarding UI shall deny access to unregistered or unauthenticated users.
- Authorisation / Access
    - The Onboarding UI does not distinguish between admin users and general users. However, user access will be restricted to authorised workspaces.
    - Users shall only be able to view their workspaces.
- CSRF Prevention
    - The Onboarding UI shall implement JSON Web Tokens (JWT) to mitigate the risks of Cross-Site Request Forgery (CSRF).

3.4.3. Scalability

As the Faethm platform continues to expand, the need for a scalable solution grows with it.

- The Onboarding UI shall be developed in a manner that provides a level of convenience for the Faethm developers to expand or shrink the number of questions.
- The Onboarding UI shall also be developed to handle a growing number of concurrent users.

4. Client Feedback

4.1 Meeting Date and Time

We submitted our *Scoping Document* for review via email and GitHub on Monday 28 March 2022, 9:00am AEDT. In addition, we submitted our entire *Deliverable 2* to provide context to the *Scoping Document*.

4.2 Feedback Received

The feedback we received was positive and confirmed our vision of the Onboarding UI aligned with those of the Faethm team.

4.3 Team Response

There are no further response / action points required at this stage.