



Full Stack Software Development Accelerator

Mission X – Final Portfolio Assessment

Mission Due Date

Last day of the programme

Learning Outcomes

Upon successful completion of this Mission, you will be able to:

1. Analyse and select best fit solutions of existing and upcoming technologies in order to develop a technology product solution.
2. Apply broad technical knowledge to develop a technology product solution.
3. Apply self-directed learning and self-reflection techniques with the purpose of becoming a lifelong learner.
4. Apply security and technology product development best practices to deliver quality outcome in the context of practice.
5. Apply collaboration skills to work as an effective team member.

Time Allowance

You will be given this Mission in week 3 of your course and it must be completed by the end of week 12.

Resources

You will be provided with website, and the images used within the website design.

Assessment Method

The final portfolio assessment is assessed based on whether you meet the competency statement or not. You must achieve an outcome of “Competent” for ALL 14 components to be awarded the certificate.

The only Mission to be assessed will be Mission X. All previous Missions are formative and will not be assessed formally.

Summary of Evidence

A portfolio of evidence which is made up of the following five (5) items:

As an individual:

1. A completed Project Evaluation Form
2. Completed Peer Review Form(s) for each member of your team (excluding yourself)
3. A Self Reflection Form

As a team:

4. A Product Demonstration (maximum 15 minutes) in person to your Assessor
5. A link to your GitHub project

Resubmissions

You must make a genuine attempt at the assessment.

Your Assessor will provide you with feedback on your technical product solution, product demonstration, and team collaboration.

If you have made a genuine attempt but do not meet the standard of “competent” you will be allowed to resubmit your portfolio, or portions of your portfolio, for a re-assessment within 10 days of receiving your initial result.

Mission Description

You are working as a software developer for an organisation. Your task is to work collaboratively in a team of three (3) or more to complete the development of an application, according to the technical and functional requirements specified in “Mission X Design.docx”.

You will need to use the correct technologies to build the different parts of the application, apply best practices, and ensure that your team is working together to build the application.

You will also need to do some research and learning outside of what is being taught in class.

Your Mission, should you accept it, is to:

As a Team

- Create a working application according to the design specification, hosted on a public server or on a team member’s laptop.
- Host all the source code for the Mission in a Github account, with traces of collaboration including a history of commit and push code. Submit a link to your Github project prior to your demonstration on the last day of the programme.
- Demonstrate your completed application, on the last day of the programme. As you demonstrate, explain the GUI, servers used, backend code and database. The duration of the demonstration should be a maximum of 15 minutes.
- **NOTE:** You must allocate work roles fairly so that each team member has responsibility for at least three (3) pages in the finished application. Each team member is expected to demonstrate effective collaboration skills.

As an Individual

- Complete a “Project Evaluation Form” describing the technologies you used and why, the research you did, and how you applied technical knowledge and skills to your product solution.
- Complete a “Peer Review Form” for each of your team members.
- Complete a “Self Reflection Form” describing what work you contributed, what you learned, what challenges you faced and what actions you will take towards your own professional development.

Your facilitator will also complete a Team Member Review Form for each person and this will be used to inform judgement against Learning Outcome 5.

Mission X Assessment Criteria Rubric

This Assessment Criteria Rubric will help you understand what is expected of you for each Learning Objective of the programme.

The rubric addresses your skills in your chosen profession, self-directed learning skills and your abilities to work well as a member of a team.

You will be assessed based on whether you meet the competency statement or not. You must achieve an outcome of “Competent” for ALL of the competency statements to be awarded the certificate.

The only Mission to be assessed will be Mission X. All previous Missions are formative and will not be assessed formally.

PLEASE READ THE ASSESSMENT CRITERIA RUBRIC BELOW CAREFULLY,
TO ENSURE THAT YOUR SUBMITTED PORTFOLIO MEETS ALL THE REQUIREMENTS

Component	Competency Statement	Evidence You Will Provide
1. Analyse and select best fit solutions of existing and upcoming technologies in order to develop a technology product solution.		
Analysis and selection of technical assets to accelerate product development	<ul style="list-style-type: none"> Rationale for selecting technical assets applied in product development is explained, including: <ul style="list-style-type: none"> the benefits and limitations of technical assets Choice of any assets selected is explained The assets selected are appropriate for the product solution. <p>Technical assets may include, but are not limited to; development languages, code libraries, and frameworks.</p> <p>Appropriate selection means that assets are selected because they will enhance the efficacy or efficiency of development, or the usability, performance, functionality, security, or reliability of the product solution.</p>	Project evaluation form
Analysis of upcoming technologies which may be applied to the product solution	<ul style="list-style-type: none"> At least one upcoming technology is identified, and a web link is provided as a reference An upcoming technology is analysed as it would apply to the product solution, including discussions of benefits, strengths, and/or limitations to the product solution. <p>(Upcoming technologies may include, but are not limited to; artificial intelligence and virtual reality).</p>	Project evaluation form

Assessor notes:

Component	Competency	Evidence you will provide
2. Apply broad technical knowledge to develop a technology product solution.		
Complete requirements for the Mission	Functionality completed meets at least: <ul style="list-style-type: none"> • Half of the Technical Design requirements in the Mission, AND • Half of the Functional Requirements in the Mission, AND • Works in at least one of the four major browsers (Safari, Chrome, FireFox, or Edge) 	Product demonstration Project evaluation form Source control / GitHub
Professional organisation of code	At least four (4) of the following are demonstrated: <ul style="list-style-type: none"> • Variables declared at the beginning of their appropriate scope • related functions are grouped together in the same file • minimum redundant/non-used code • technical assets organised in logical folder structure • in-line comment to state naming conventions • files, variables, and functions are named with appropriate names and follows a consistent convention (either snake case or camel case) • relevant, inline comments to explain less intuitive logic 	Product demonstration Source control / GitHub

Assessor notes:

Component	Competency	Evidence you will provide
3. Apply self-directed learning and self-reflection techniques with the purpose of becoming a lifelong learner.		
Apply self-directed research to the product solution	<ul style="list-style-type: none"> • Research is identified and described with appropriate references provided • How self-directed research was applied to the product solution is described • Code snippets or other technical assets from self-directed research, are appropriately applied to the product solution. <p>Examples of appropriate application include: code, images or assets are used to enhance the usability, performance, functionality, security, or reliability of the product solution.</p>	<p>Product demonstration</p> <p>Project evaluation form</p>
Reflect on own learning and professional development	<p>In project evaluation form, the learner has:</p> <ul style="list-style-type: none"> • reflected on their experience of developing a technology solution • identified areas of strength within the project or their own performance • Identified areas for their own professional development, including at least one (1) technical or coding area 	<p>Self reflection form</p>

Assessor notes:

Component	Competency	Evidence you will provide
4. Apply security and technology product development best practices to deliver quality outcome in the context of practice.		
Apply cybersecurity considerations	Security measures which were applied or could be applied are present as: <ul style="list-style-type: none"> • Relevant inline comments in code, OR • Explained separately on project evaluation form. 	Project evaluation form Source control / GitHub
Ensure code quality	Demonstrate at least two (2) of the following in source control tool: <ul style="list-style-type: none"> • testing and defect fixing (e.g. writing comments to highlight bug fixes) • evidence of formative peer review of code (e.g. change suggestion comments within code, or evidence of a formal code review in GitHub) 	Product demonstration Source control / GitHub
Collaborate using appropriate tooling	<ul style="list-style-type: none"> • Collaboration tools are visible in the source control • Collaboration of team members is visible in the source control as interaction or code push throughout the Mission. 	Source control / GitHub

Assessor notes:

Component	Competency	Evidence you will provide
5. Apply collaboration skills to work as an effective team member.		
Organise time to meet deadlines	Attended meetings and delivered work on time, as per evaluation by the facilitator and at least half of peers in the team	Peer review Assessor evaluation
Demonstrate mutual respect	Demonstrated mutual respect, per evaluation by the facilitator and at least half of peers in the team	Peer review Assessor evaluation
Communicate ideas effectively	Ideas communicated effectively, per evaluation by the facilitator and at least half of peers in the team	Peer review Assessor evaluation
Listen to the point of views of others	Listened to the point of view of others, per evaluation by the facilitator and at least half of peers in the team	Peer review Assessor evaluation
Allocate roles and work fairly	Taken on a fair share of end-to-end product development responsibility in the team (e.g. in a team of 3, responsible for developing roughly 1/3 of the product features), per described in project evaluation Each member of the team is responsible for at least three (3) pages in the finished application.	Peer review Assessor evaluation Source control / GitHub

Assessor notes:

Appendix A - Mission X Project Evaluation Form

You are requested to complete this evaluation form before your final presentation of Mission X. Failing to complete and submit this form will impact your programme completion.

1. What programming languages or technologies did you use to build the front-end, back-end, and database in this Mission? Why did you choose these technologies over their alternatives? What are the benefits, strengths and limitations for each of the languages?

2. What are the code libraries used in the system you built, and what were each used for? What are the benefits, strengths and limitations for each of the languages?

3. What extra research and learning did you do to assist you in completing the Mission? What did you apply from your research to the code in this Mission, and how? (Please be specific and include references to anything you read.)

4. What upcoming technologies could be applied to improve the functionality of the system? What are the strengths, benefits, and limitations of using this technology? (Please include a reference to the upcoming technology for the assessor.)

Appendix B - Mission X Self Reflection

Using the prompting questions below, reflect on your knowledge and skill development during the Mission.

What work were you responsible for completing for this Mission? (E.g. Full stack for 3 web pages of the application, or writing front end code for all pages.)

Describe what the Mission experience was like for you.

What did you learn?

What went well?

What was challenging?

What areas do you plan to improve on? (Please include on technical area and one non-technical area)

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Appendix C – Peer Review Form (for Learners)

For **EACH** one of your project team members excluding yourself, complete the following:

Question	Answer
What is your team member's name?	
Did he/she regularly attend meetings?	Yes/No
Did he/she deliver on his/her agreed work in time?	Yes/No
Did he/she demonstrate mutual respect for you and others?	Yes/No
Did he/she communicate his/her ideas clearly with you or the team?	Yes/No
Did he/she allow others to express themselves and try to understand?	Yes/No
Any comments you would like to add:	

Appendix D – Team Member Review Form (for Assessors Only)

Learner name:		Date of Assessment:	
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Question	Yes / No	Evidence for this judgement (Assessor to provide a description of observed actions, behaviours or other evidence)
Did he/she regularly attend meetings?		
Did he/she deliver on his/her agreed work in time?		
Did he/she demonstrate mutual respect for you and others?		
Did he/she communicate his/her ideas clearly with you or the team?		
Did he/she allow others to express themselves and try to understand?		
Any comments you would like to add:		

