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BSc Aerospace Software Engineering  
Module Code: DN5MD003

Object-oriented programming: Assignment 2

Project Charter

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# 1.0 Document Control

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Role | Action | Date |
| Alex Cooke | Project Manager | Authored | 15 Sept 2025 |
|  |  | Reviewed |  |
|  |  | Approved |  |

# 2.0 Executive Summary

This document provides a high-level summary of the Jet Interior Design software produced for BAI Innovations. This document aims to minimise scope creep and will guide production of subsequent design documentation. This document addresses:

* Project Aims
* Context
* Main Milestones
* Team Composition and Structure
* In scope/Out-of-scope coverage
* Success criteria & KPI’s

# 3.0 Project Aims

The project aims are as follows:

* Produce and deliver a functional piece of software, in line with the defined requirements
* Demonstrate clear Object-Oriented design principles (Abstraction, Inheritance, Polymorphism, Encapsulation) throughout the software architecture and code.
* Produce structured design & technical documentation, supporting code maintainability and future development
* Use version control (GitHub), enabling effective collaboration and structured workflows.
* Implement a Scrum approach, including regimented sprint planning and retrospectives, to facilitate continuous improvement and strengthen collaboration throughout.

# 4.0 Context (TBC)

# 5.0 Team Composition and Structure

| **Name** | **Role** | **Primary Responsibilities** |
| --- | --- | --- |
| **Alex** | Project Manager | Oversees planning, timelines, and coordination. Facilitates sprint planning and ensures alignment with project goals. |
| **Hannah** | QA & Testing Lead | Designs and executes test plans, manages bug tracking, leads retrospectives, and ensures software quality. |
| **Isobel** | Lead Programmer | Responsible for core implementation, translating design into functional code, and maintaining technical consistency and competent version control across the codebase. |

*In addition:*

* All team members are expected to contribute towards peripheral implementation
* Peer review is encouraged across code and documentation to ensure quality, share knowledge and proactively identify issues
* Each team member is responsible for updating relevant documentation with their contribution, maintaining transparency and traceability. This is
* All team members are expected to engage in sprint retrospectives, providing insights to improve team efficiency and cooperation.

# 6.0 In-scope/Out-of-scope coverage

# 7.0 Key Performance Indicators (KPI’s)

## 7.1 Development & Delivery

* Delivery of MVP by agreed-upon deadline
* Percentage of planned features to be delivered during each sprint (90%+).
* Branching Discipline – Ratio of feature branch commits vs. direct commits to main branch < 5%.
* Commit frequency – average number of commits per developer per sprint ≥ 3.

## 7.2 Quality Assurance

* Average test execution rate ≥ 95% across all sprints
* Successful Test Pass Rate is ≥ 80%
* Minimum 40% of tests are automated
* Bug reopen rate < 25%
* QA documentation completeness – 100% of test cases, results and bugs are fully documented, including code modifications (where necessary)

## 7.3 Team efficiency

* Team attendance – 90% attendance across all sprint planning & retrospective meetings
* Average time taken to respond to internal questions/blockers is < 7 working days
* Percentage of code and documentation reviewed by another team member before completion/merging is > 90%.
* Maximum 2 scope changes across all sprints within the project
* Rating (1-5) given by each team member during sprint retrospectives to assess time management, productivity and inclusiveness within the team