



College of Engineering, Construction and Living Sciences
Bachelor of Information Technology
ID737001: Game Development
Level 7, Credits 15
Project: Game Development + Demo

Assessment Overview

In this assessment, you will:

- Form a **group of three** to design and develop a game using a game engine of your choice. In addition, marks will be allocated for code quality and best practices, documentation and Git usage.
- Produce a game analysis report covering a range of key ideas. The game can be of your choice.

Learning Outcome

At the successful completion of this course, learners will be able to:

1. Design and develop a game using industry standard tools, technologies and practices.

Assessments

Assessment	Weighting	Due Date	Learning Outcome
Assignment	30%	Monday 9th June at 7.59 AM	1
Project: Game Development + Demo	70%	Monday 9th June at 7.59 AM	1

Conditions of Assessment

You will complete this assessment during your learner-managed time. However, there will be time during class to discuss the requirements and your progress on this assessment. This assessment will need to be completed by **Monday, 9 June 2025 at 7.59 AM**.

Pass Criteria

This assessment is criterion-referenced (CRA) with a cumulative pass mark of **50%** over all assessments in **ID737001: Game Development**.

Authenticity

All parts of your submitted assessment **must** be completely your work. Do your best to complete this assessment without using an **AI generative tool**. You need to demonstrate to the course lecturer that you can meet the learning outcome for this assessment.

Learning to use AI tool is an important skill. While AI tools are powerful, you **must** be aware of the following:

- If you provide an AI tool with a prompt that is not refined enough, it may generate a not-so-useful response
- Do not trust the AI tool's responses blindly. You **must** still use your judgement and may need to do additional research to determine if the response is correct
- Acknowledge what AI tool you have used. In the assessment's repository **README.md** file, please include what prompt(s) you provided to the AI tool and how you used the response(s) to help you with your work

It also applies to code snippets retrieved from **StackOverflow** and **GitHub**.

Failure to do this may result in a mark of **zero** for this assessment.

Policy on Submissions, Extensions, Resubmissions and Resits

The school's process concerning submissions, extensions, resubmissions and resits complies with **Otago Polytechnic** policies. Learners can view policies on the **Otago Polytechnic** website located at <https://www.op.ac.nz/about-us/governance-and-management/policies>.

Submission

You **must** submit all application files via **GitHub**. Create a repository and add the course lecturer as a collaborator. Late submissions will incur a **10% penalty per day**, rolling over at **5:00 PM**.

Extensions

Familiarise yourself with the assessment due date. Extensions will **only** be granted if you are unable to complete the assessment by the due date because of **unforeseen circumstances outside your control**. The length of the extension granted will depend on the circumstances and **must** be negotiated with the course lecturer before the assessment due date. A medical certificate or support letter may be needed. Extensions will not be granted for poor time management or pressure of other assessments.

Resits

Resits and reassessments **are not** applicable in **ID737001: Game Development**.

Instructions

Project - Technical and Professional Proficiency (Individual and Group) - Learning Outcome 1 (45%)

- **Group:**
 - The game needs to open without code or file structure modification in the chosen game engine.
 - Gather requirements and deconstruct them into user stories.
 - Design and develop a game using the chosen game engine that meets the requirements.
 - Demo the game on **itch.io**.
- **Individual:**
 - Contribute a meaningful amount of code to the game. This will be judged by the number of **Git commits** and the number of lines of code contributed.
 - Perform the following for each feature that is merged into the **main** branch of the **GitHub** repository:
 - * Code review another team member's code.
 - * Play test the feature and provide feedback to the team member.This needs to be documented in the **GitHub** issue that the feature is associated with.
 - Communicate with team members. This should be through **Microsoft Teams**. If you wish to use another communication tool, you need to get approval from the course lecturer. Provide screenshots of your communication in the **GitHub** repository.

Project - Code Quality and Best Practices (Individual) - Learning Outcome 1 (15%)

- Appropriate naming of files, variables, methods and classes.
- Idiomatic use of the programming language and game engine.
- Efficient algorithmic approach.
- Sufficient modularity considering the **SOLID principles** and **design patterns**.
- Each file has a **comment** located at the top of the file. The comment should explain the purpose of the file and the author.
- Formatted code.
- No dead or unused code.

Project - Git Usage (Individual and Group) - Learning Outcome 1 (10%)

- **Group** requirement - **GitHub** project board or issues to help you organise and prioritise your development work. The course lecturer needs to see consistent use of **GitHub** issues and the project board for the duration of the assessment.
- **Individual** requirement - Your **Git commit messages** should:
 - Reflect the context of each functional requirement change.
 - Be formatted using an appropriate naming convention style.

Project - Documentation (Individual and Group) - Learning Outcome 1 (15%)

- **Group** requirement - In a **Microsoft Word** document, explain the following:
 - Basic story
 - Design pillars
 - Gameplay
 - Main features and mechanics
 - Target platform and audience
 - Interface and controls
 - Inspiration
 - Visual style
 - Audio style
 - Known issues and bugs
 - Future improvements
 - A URL to the game on **itch.io**.
- **Group** requirement - Engage with **five external** play testers and in a **Microsoft Word** document, record the following:
 - Overall experience:
 - * Rate your overall experience playing the game from 0-5 (0 being the worst and 5 being the best).
 - * A brief explanation of your experience. Highlight one thing you enjoyed and one thing you did not enjoy.
 - Game mechanics:
 - * Identify any game mechanics that felt intuitive or unintuitive.
 - * Improvements to enhance the game mechanics.
 - Controls:
 - * Were the controls easy to learn and use?
 - * Did you encounter any issues with the controls?
 - User interface:
 - * Was important information presented clearly?
 - * Did the user interface enhance or detract from the game?
 - Difficulty:
 - * Was the game too easy, too hard or just right?
 - * A brief explanation of challenges that felt challenging or unfair.
 - Bugs:
 - * Document any bugs you encountered during play testing.
- **Individual** requirement - Select three interesting game mechanics with that you implemented and in a **Microsoft Word** document the following:
 - What did you implement?
 - What did you research during the implementation? Provide a link to the resources you used.
 - What did you try? What worked? What did not work?
 - What did you learn?
 - How can you apply what you learned to future games?
 - In addition, what did you find most challenging professionally? How did you overcome it?
- **Individual and group** requirement - Correct spelling and grammar.
- **Individual and group** requirement - References and in-line citations are formatted using APA 7th edition.

Game Analysis Document (Individual) - Learning Outcome 1 (15%)

- Overview of the game. **Note:** Explain the game to the reader so they have an understanding of what the gameplay is like.
 - Number of players, i.e., single-player or multi-player.
 - * If multi-player, how many players can you have?
 - * Is the game real-time or turned-based?
 - * Are there different gameplay modes based on the number of players?
 - Rules and goals.
 - * What are the basic rules of the game?
 - * Is there a win, end or endless state to the game?
 - * What are the goals of the game?
 - * Are there multiple goals in the game?
 - * Can a player set their own goals?
 - Gameplay.
 - * What is the genre of the game?
 - * What are the core game mechanics?
 - * What is the player experience like, i.e., satisfaction, learning, efficiency, immersion, motivation, emotion and socialisation?
 - * Are there difficulty levels? Does the difficulty level increase as a player progresses through the game?
 - * Is the game easy to pick up and play?
 - Ethics and morals.
 - * Does the game offer a player ethical and moral decisions of their own, i.e., a player can become a hero or villain?
 - * What are ethical and moral decisions in the game that a player can apply to the real world?
- Correct spelling and grammar.
- References and in-line citations are formatted using APA 7th edition.

Additional Information

- **Do not** rewrite your **Git** history. It is important that the course lecturer can see how you worked on your assessment over time.
- You need to show the course lecturer the initial **GitHub** project board or issues before you start your development work. Following this, you need to show the course lecturer your **GitHub** project board or issues at the end of each week.