



MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

159.261—Games Programming Assignment 2: 2D Game

Total marks: 100

Course Weighting: 40%

Late submission: 1 mark per day late

Due Date: Sunday 4th June 2022 11:59pm China time

Group Presentations: upload along with other files

Assignment Brief:

Design and build a computer game in Java as a team. You have the freedom to design and build your own 2D game in Java. You can choose to use GameEngine.java, available open source Java based game engines or write your own. The game graphics should include at least some sprites and some animation, the game should have some sound effects (even if it is just background music) and must have a scoring system (gaining and losing scores as a result of some actions). You are welcome to add other additional features (start menu, multi-player, more sophisticated graphics/animation/collision detection etc).

Make sure you are realistic about the size of the game you can create in the available time. I encourage you to be ambitious and step out of your comfort zone, but make sure you can finish everything and have a working game by the deadline.

Groups

By 7th May 2023 all students must be enrolled in a group of their choice. Those who are not part of a group by then will be randomly assigned to one.

By the end of the day of the 8th of May, do the following -

1. Select a team leader
2. Group leader should email me their group number and details (name of game, type of game, brief description of game) of the exact project they are planning to work on.

Game Suggestions (*these are just examples; you can choose other genres too*)

Puzzle Game

Puzzle games involve the user attempting to solve a puzzle or a series of puzzles. This could be a game like Tetris where pieces are continuously falling and the player must fit them together to form lines or something like a sliding puzzle where the player has to slide tiles around to form a complete image. Scoring in this type of game would be the number of lines the player can complete before the game ends (in the example of Tetris), how fast the player can complete the puzzle or how many moves it takes the player to complete the puzzle.

Platform Game

Platform games generally involve the player controlling a character jumping between different platforms. The aim is usually to reach an exit, collect items or avoid opponents. Scoring may be based on how long the player can survive, how long it takes them to reach an exit or how many items they manage to collect.

Maze Game

Maze games consist of the player attempting to navigate a maze and complete some objective. This may involve simply reaching the exit or collecting items hidden in the maze. This type of game may be single-player where the player simply has to navigate the maze or two-player where the players compete to collect the most items or reach the exit first. This type of game may also include one or more computer-controlled enemies that either compete against the player or try to attack the player. Scoring in this type of game would depend on the number of items the player can collect, how fast they can complete the maze or how long they can avoid the enemy agents.

Group Presentation

All groups will give an in-person presentation in the class. A group presentation schedule will be released on Stream soon. The presentation duration would be a maximum of 8 minutes. All group members must take part in the presentation. 10% of total marks will be allocated to the presentation.

Each group is also required to submit a recorded version of their presentation that includes code and game demonstration.

As part of your presentation, cover the design decisions, architecture of the game, how your java classes are linked together, challenges faced during the project, and a live demo or video of the game and how to improve it in future.

Submission Instructions

Put comments at the top of your program and make sure you include the **name** and **ID** number of **all members** of the team.

Make sure your code is written clearly and concisely, is well commented. You will lose marks if the code does not compile.

Prepare a document (4-5 page maximum), outlining your design decisions, features of the game as well as some screenshots of the game. List a brief summary of the contributions made by each team member as well.

Stream Submission

Only the team leader should submit all project files (source code, documentation and presentation) zipped and named as GroupName_Assignment2.zip on Stream.

