

COMP30540 "Game Development"

1st Game Programming Assignment (of two in total)

Due Monday 3rd March before 6 pm .

This assignment is worth 25% of the marks for the module.

Note that plagiarism is an offence taken seriously in UCD, Science, and CS. Do not present work as your own that is provided to you by someone else or copied from them. Acknowledge the sources of materials you use fairly, such as photographs or stock images. Do not allow or encourage others to copy your own work.

Space Action Game template

The assignment will be to take a current game template written in Java using the eclipse IDE (MARS 2) and modify it into a complete game over 6 weeks. You will then be interviewed about your modifications on Week 7. During your first lab, the TA's and demonstrators will make sure you can load the projection eclipse and test it out. BASIC UML Class diagram is included in the eclipse project.

There will be four areas that you need to modify. Grading Rubric is in a separate file that you can download

Genre (Mechanics) / Theme (Graphics) (25%)

The game should be transformed, it should integrate a different mechanic than the original action genre and has all artwork changed to give it its own unique theme. The new mechanics must work well to make an interesting game. Find appropriate images to change the theme of the game. Look at websites for game art such as <https://opengameart.org> . You could make an educational game, where numbers or letters must be hit in a specific order. You could turn the simple swing game into a platformer. You could make the game into a puzzle, where the space (now an explorer) must go around a map uncovering items. Its all up to you. The template gives you a basic controller, viewer and model to work with. You could keep the action mechanic and add RPG elements to the game, which would still allow you to get top marks.

Features(25%)

You need to add multiple features to the game. Such as levels, difficult options on the menu screen, different types of attacks (depending on genre). Saving/ Loading. Power ups, any new way of interacting could be a new feature. Improving features like collisions to count as well, in fact any improvements will gain you marks. At present the easiest marks to get is to add in collisions and lives which would get you a pass in this area.

Functional game (25%)

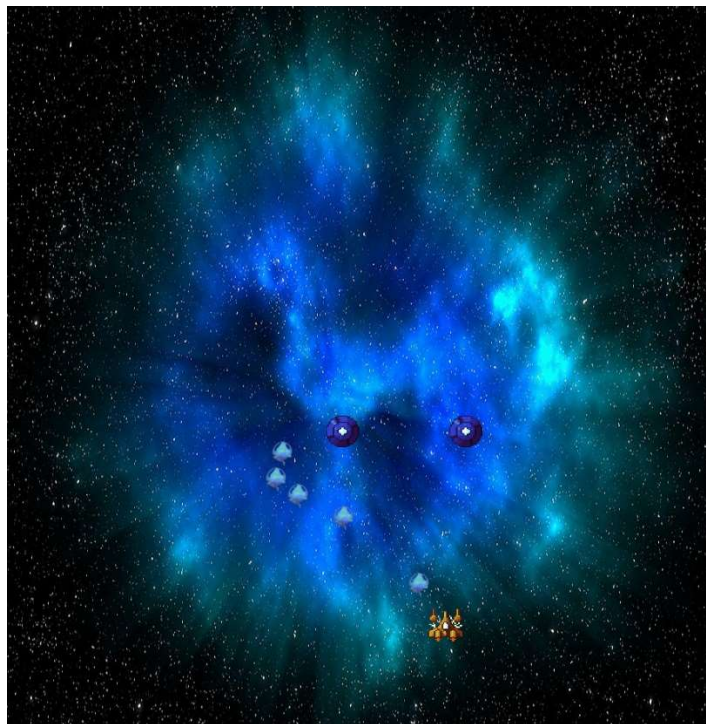
The game plays well and is an interesting and engaging game. At present the easiest marks to get is simply having an end to the game, which would get you a pass in this area.

Multiple Controllers (25%)

The game allows for two players or more. The game integrates different control mechanisms. The controllers are smooth and work perfectly without bugs.

Current State of the project

- **Menu screen**
 - Just one button to press to start the game loop and hide any other swing elements
- **The controls**
 - At present you can move the spaceship using WASD and SPACE to fire.
- **The action**
 - The Alien UFO come down towards the player. If they shoot the UFOs they get one point each, if the UFO make it to the end
 - No Collision between UFO's and player is implemented
 - No END game state, e.g its not a functional game



Report

Write a report on what you have achieved, and a few (static) highlights from play of your game.

Describe the events (such as key presses and key releases) that make your game work. Apart from some screenshots, your report should not exceed three pages of text.

Advice

The Moodle submission area allows you to upload up to 200Mb. This should be sufficient for the project folder, the report, and a screen recording. Recordings of over 100Mb are not appropriate and I don't want to be sent links to Google Drive where I can view them at my inconvenience!

Standard UCD penalties for lateness will apply: if submitted up to one week late, 10% will be lost (turning 62% into 52% for example); if submitted even later but within two weeks, 20% will be lost; if not submitted within two weeks, barring extenuating circumstances, all marks will be lost.

It is far better to submit something, even if incomplete and/or late, than to submit nothing at all.

Submission Do's

Do put your name and student number in the first few lines of the report, and in comments in the first few lines of each source file you write.

Do use moodle to submit a .zip containing

- your source code
- your report
- a 2-3 minute low-resolution screen recording of you playing the game

Do make that zip file unzip into a folder bearing your name. Temporarily rename your own copy while making the zip file to achieve this.

and Don'ts

Do not present your report as anything other than pdf. Avoid, for example, .doc and .docx and .odt and .rtf.

Do not submit a .rar, .jar, .7z, or any other form of archive except .zip.

Do not provide multiple versions of your code.

Do not send an email to submit your assignment, use only the moodle.

Do not give your submission an awkward filename. Just use your own name for it.

I won't penalise you, of course, for any of this but just make my life a little easier 😊

And the real Don't

Do not include anything that is not either source code, your report, your recording or your submission form without a reference.

Plagiarism will be get you a 0 mark.