Overview
The coursework for AC31009 consists of designing and implementing a computer game. This can be any sort of game you wish from a side scrolling shooter to a logic puzzle based one.

However, there are 4 things that your game must have:
1. It must have a graphical user interface (GUI) of some sort.
2. The implementation must use the MVC design pattern.
3. It must also use **two** other design patterns.
4. It must make use of at least **one** of the following concepts:
    a. physics engine
    b. collision detection
    c. networking
    d. artificial intelligence
    e. level creator

This assignment is in 3 parts:
Part 1 is a plan for the game and is due in by Midnight on Monday the 21st of October.
Part 2 is a elevator pitch for your game design this will be done during the Seminar on Friday the 1st of November.
Part 3 is the game itself this is due in by Midnight on Monday the 18th of November.

Part 1
Part 1 of the assignment is a detailed plan for your game. It should include the following sections:

1. A one page game design overview (based on the worksheet given out).
2. A more detailed explanation of the design details.
3. A detailed explanation of which software and hardware you will be using and why this is the case.
4. A detailed explanation of the graphics and audio used in the game. Both of these elements should be completed before the plan is finished. The graphics (or a sample of them) should be included in the appendix.
5. A detailed explanation of the game code structure including detailing where you will use each of the design patterns. This should include appropriate UML diagrams.
6. A detailed account of which of the game specific features you will be including (point 4 in the game specification above).
7. A detailed time management plan.
8. A bibliography showing all the references used.

This plan should be no more that 30 pages in length (not including appendices).

Two copies of this plan should be submitted:
- A virtual copy through mydundee
- A paper copy in the submission boxes in lab 0. This will be returned to you with comments written on, for your record.

This is due by Midnight on Monday the 21st of October and is worth 20% of the marks allocated for this course.

Part 2

Is an elevator pitch for your game design. This should be based on the one page game overview developed as part of the game plan. You will have 2 minutes to pitch you game, followed by 2 minutes for questions. A seminar on presentation skills and how to give pitches will be held on Friday the 25th of October. The pitches will then be delivered during the Seminar on Friday the 1st of November. This aspect is worth 5% of the marks allocated for this course.

Part 3

This is the actual game itself. There will be no classes in AC31009 after the 1st of November to allow you to complete this aspect. You should submit the following all on mydundee:

1. The full code for your game
2. A short report (5 pages) detailing:
     a. Any changes from the project plan and why these were made.
     b. Where you actually used design patterns and these can be found in the code.
     c. Where you used the games aspect and where this can be found in the code.
     d. Anything you would do differently if you were to tackle this project again.
3. A short video showing the finished game being played. This can either be made through using screen capturing technology or by using one of the schools flip cameras. This should be uploaded to youtube, directions on this will be given nearer to the time.

This is all due by Midnight on Monday the 18th of November and is worth 25% of the marks allocated for this course.

Marking scheme for Part 1:

Section		Marks
One page game design		/10
Explanation and justification of game design		/10
Explanation and justification of Software and Hardware		/10
Explanation and justification of Graphics and Audio		/10
Behavior diagram with justification		/5
Class Diagram (or equivalent) with justification		/5
Explanation and justification of code design including design patterns used		/20
Explanation and justification of game features used such as AI and physics engine		/10
Time management plan		/10
Report style including bibliography		/10
Total		**/100**

Part 2 will be peer marked according to the following criteria:
50% Marks for Presentation and 50% Marks for Content.

Marking Scheme for Part 3:

Code and Demo Video

Criteria	Comments	Marks
Game compiles and is polished		/40
Design pattern are used to good effect meaning that the code is maintainable and extendible.		/20
User interface is clear and intuitive. i.e. a player can work out how to play your game with minimal instructions, which are provided.		/10
Graphic elements are used to good effect.		/10
Game is well written and well tested.		/10
Final Mark		/90

Report

Criteria	Comments	Marks
Explains where design patterns are used in code.		/2
Explains why final game deviates from plan.		/5
Explains testing strategy and the results of this testing.		/3
Final Mark		/10

Total: /100