Assignment 1 (Assessed by Group Presentation) Term 1 Week 6 Lab - No Late Period

- **Due** 28 Oct by 15:00
- **Points** 100
- **Available** 29 Sep at 9:00 - 28 Oct at 15:00

This assignment was locked 28 Oct at 15:00.

Group-based, Interactive 3D Game Development in Unity 3D.

Create an interactive game of your choice using Unity 3D and C# code. The game can have any aim, but must meet the following set of criteria:

1. Contains a 3D environment in which the player can move in the x and z directions (backwards, forwards, left and right) and can also move in the y axis (jumping or climbing or flying etc.).
2. Has a player avatar with some animation which is viewed from a third person perspective by a following camera.
3. The player avatar object must be limited in its movement so that it does not move outside the bounds of the environment.
4. Collision detection between the player avatar and at least five other objects must be detected and used as part of the game play. These objects must be physically different models from each other and include some animation.
5. An object that moves independently in the z and x axis and is used as part of the gameplay.
6. A life system should be implemented so that the player loses lives (or parts of lives) during the game to a point where they have no life left and the game is over.
7. A scoring system based on contact with game objects (collectables) and an achievable objective.
8. A ground plane which has some unevenness i.e. is not flat.
9. Objects which have applied textures.
10. An entry User Interface (splash page and instructions) and exit UI (Game over, You Win and restart).

You may use existing Unity libraries in your development, but you MUST be using C# code and can not use applications which automatically create code.

How you will be marked

Criteria	Ratings	Pts
Basic Specification A mark of up to 40 will be awarded for a game that just meets the basic specification set out in parts 1-10 above in a playable and well-designed manner with no obvious bugs.		40 pts
Additional Game functionality A mark of up to 40 will be awarded for a development that exceeds the specification set out above .e.g. ◦ Additional interactivity and complexity such as: ▪ complex game play ▪ using different objects controlled independently ▪ creating increasingly harder levels ▪ differential scoring scheme for collecting different objects ▪ Any enhancements or additions to the view, design, layout or action of the game e.g. complex environments, use of more advanced physics, complex animation etc.		40 pts
Presentation Your game will be assessed by a 15 minute group presentation where you will demo your game. This will be split into three sections of five minutes each as follows: • PowerPoint presentation outlining the design, structure and functionality of your game. • Game demo. • Question period. Presentations will take place in the lab on Thursday 9th November. There is no late period for this assignment and you are expected to attend as a group. However, not everyone in your group needs to actually present. If you do not attend your group presentation will receive a mark of zero for this component, unless you have mitigating circumstances.		20 pts
Total points: 100		

Grade :

Basic Specification

Complete and playable game. Meets the basic specification with some nice added functionality.

40/40

Additional Game Functionality

Playable single level parkour game with implementation of moving platforms showing a good level of development. Relatively simple base environment, but with clear direction of player travel. Object development although simple is good and meets the game functionality requirements. Character interaction with environment is a bit buggy but in general works well to produce a playable game. Development of rigged model shows good understanding of more advanced development and insight in to potential issues. Implementation of moving platforms is well done although interaction with game avatar could be improved. Collectables work well and overall game environment is well-produced.

20/40

Presentation

Good slides and well-organised presentation. Clear presentation with coverage of game objects and interaction and some detail on the functionality and scripts. Good demo of games and assets.

14/20

Total 74%