

BSc in Software Development – Year 4

Mobile Applications Development 3 Project

Part 1 – Design

Create a design and storyboard for a game. This is a 2D game to be developed as part of the module requirements. The types of game that are acceptable to design are:

- Shooters – Classic, horizontal or vertical scrolling
- Platform – Classic or 2D
- Traditional Game – Board Games (requires a simple AI)

You need to research these game types before deciding which you will design. Look at examples of the game types and understand what makes them popular to different players. Bear in mind that “clone and tweak” is a valid design method in which you pick an existing game and then modify the game world to suit your design. You may design from first principles.

If you are taking the “clone & tweak” approach, you need to identify clearly the game or games you are using as basis and present the evidence of the type of game it is within the options provided.

For the design, you need to create the following components

1. **Front End:** A term applied to all menus and screens that occur outside of the gameplay. This takes the player from the title screen to the point that gameplay begins.
2. **In-Game Menus:** A set of menus and screens accessed in-game, often from a pause menu. These form part of the game mechanisms rather than being distinctly separate.
3. **Control Mechanisms:** The way in which the player controls the game entities. Many games have just one control mechanism.
4. **The Game:** The gameplay screens showing the initial setup, how the action starts, a midpoint in play and the winning/progression conditions depending on the game you are designing. If the game is episodic in nature, then explain how episodes are defined and how the player moves between them.

Keep in mind the principles of *simplicity* and *expressibility* and the *learning curve* when designing the interface. The interface should be as simple as possible to support the required actions. The tighter the game design, the easier to achieve. The more extensive the design, the harder to achieve. Expressibility is concerned with the degree of options and choice available to the player. The more extensive the game the greater expressibility required. The learning curve is a conceptual measure of how hard it is to learn to control or use a game.

Deliverable

A **design document** for the game that presents evidence of research to understand the different types of game and the reason for choosing one in particular.

The design document should contain initial sketches for the game with detailed notes on how the control mechanisms work, how the menus will look and how the player will be taken from the initial game screen to the gameplay itself. You can use the basic components as section headers for the document.

It clearly lays out the reasoning behind the control mechanisms, the choices made in the design of the game menus and the options there, and the pathway for the player through the game.

It details how difficulty will be increased in the game, how the player is challenged and the dynamics of any rewards based system that is used in the game as well as winning conditions for the game.

Your sources need to be referenced – it is not possible to write this document without references.

The design document needs to be uploaded to LearnOnline **AND** delivered in printed form (no folders – just staple in the corner). It is worth 25% of the final mark for the project.

The deadline for this is Thursday 26th September 2019 at the 4pm lecture. This is a tight deadline but it is necessary to ensure timely completion of the project.

Marking Rubric for Design

0 – 35	35 – 75	75 – 100
Poor use of grammar, structure and content with little evidence of knowledge of the problem domain	Good use of grammar, structure and content with satisfactory evidence of knowledge of problem domain	Written and structured to a high standard with content that exhibits expert knowledge of the problem domain
Limited documentation of decisions and discussions leading to the final implementation of the game	Acceptable documentation of the decisions and discussions taken during the development of the game	Extensive documentation of the decisions and discussions taken during the development of the game
Limited test plan presented	Acceptable test plan presented to support the implementation of the game	Thorough test plan presented to support the implementation of the game
Limited evidence of critical analysis and conclusions	Satisfactory evidence of critical analysis and conclusions	Extensive evidence of critical analysis and conclusions