

1CB104 – Computer Game Fundamentals Assessment

Submission Date : Noon Friday 8th December 2017

This module is assessed as a portfolio of work. During the course of the module there will be **four Portfolio Tasks** assigned. Students are required to complete these tasks and submit their solutions to all four tasks as a single submission by 12 noon on Friday the 8th December 2017. The submission should take the form of a single zip file containing the solutions to all four tasks. This zip file should be submitted through Moodle.

For each task the student is required to submit their code and a short document (no more than two pages) describing their solution.

Task	Date Issued/Lecture	Title, Description
1	12/10/17 – Lecture 04 – Our First Game	<ul style="list-style-type: none">• Title – 01 – First Game• Based on the Drop game from the online tutorial at https://github.com/libgdx/libgdx/wiki/A-simple-game• For your first portfolio task you are to modify the Drop code to create a different game. You are to reimagine the game as a shooter. You can turn it in to a space invaders type game where you shoot enemies descending the screen or a vertical scroller. You can imagine it a space game, a flight game, a driving game, whatever takes your fancy• Your game must include the following<ul style="list-style-type: none">• A score , displayed on screen• A shooting system where you fire bullets/missiles/glowing balls/whatever from the player sprite at the descending enemies• Successfully shooting an enemy should remove it from the screen and increase the score• If an enemy gets past you/off the bottom of the screen you should lose points• You should replace the image assets to suit your chosen game• The following are not required but will score extra points/marks<ul style="list-style-type: none">• Changing from a vertical to a side scroller• Scrolling background elements that lie behind the player/enemies and give the impression of travelling• A second type of enemy that moves in a different way• Allowing the player to move up and down as well as left and right• Giving the player lives that they lose when the bump in to aliens• Any other cool things you can think of.
2	19/10/17 – Lecture 05	<ul style="list-style-type: none">• Title – 02 – Screens

		<ul style="list-style-type: none"> • Create a demo game that has three screens <ul style="list-style-type: none"> • Menu, Game, Game Over • The following are not required but will garner extra credit <ul style="list-style-type: none"> • Relevant image used to create Main Menu and Game Over screens • Animated effects on the Main Menu/Game Over screens • A fourth screen Options which is accessible from all screens and returns the player to the screen they came from on exit (and pauses the game if on Game screen)
3	26/10/17 – Lecture 06	<ul style="list-style-type: none"> • Title – 03 – Animated Sprites • Create an animated sprite demonstration <ul style="list-style-type: none"> • Go online and search for an interesting sprite sheet • Create a new libGDX project • Add an animated sprite to the project • Animate it so it uses the options available in the sprite sheet • Add key controls that allow you to move the sprite in all four direction <i>and</i> use the correct animation as it moves • Decide if the area is bounded at the screen edges or wraps around, either is acceptable providing it works correctly • The following are not required but will score extra points/marks <ul style="list-style-type: none"> • Add a second animated sprite that is <ul style="list-style-type: none"> • A target to be chased as it moves around randomly • Animated correctly as it moves • Animated correctly when it gets caught • Make the random movement not totally random • Have the target try to “run away” when the player gets close <ul style="list-style-type: none"> • Either make it move slower than the player so it can be caught • Or give the player a temporary speed boost option
4	02/11/17 – Lecture 07	<ul style="list-style-type: none"> • Title – 04 – Physics • Create an physics game demonstration • Create a simple ball game demonstration <ul style="list-style-type: none"> • Pong/tennis • Basketball hoops • Pinball if you are feeling brave • Use box2d to handle the physics and collision detection