## **CA – RayLib Application (23%) of Software Engineering Module**

## Brief

Create a simple application/game using the raylib library with the following features:

1. Opens a window
2. Has Sprites/3D Models: e.g. can include textures/ shapes/ shaders/ 3d models
3. Capable of user input: e.g. can be game controller/mouse input/keyboard input/use of camera
4. Sprites/3D Models capable of: e.g. movement/animation/collisions
5. Plays audio: e.g. Plays full background audio/plays individual audio clips
6. Includes text: e.g. loads different fonts
7. Uses git/github source control

## Learning Objectives

You need to demonstrate the following criteria:

1. Develop software solutions that demonstrate an understanding of the structures and concepts of an object orientated programming language.
2. Design, implement, test and debug solutions to common programming problems using an industry standard IDE.

## Deliverables

Your program must contain the following basic elements of programming

1. Data: constants, variables

2. Input reading of values from input devices (keyboard, I/O, disk drives)

3. Output: writing of information to any output device (screen, disk drive, printer)

4. Operations: comparing values, assigning values, combining values

5. Conditions / Selections: If-Then-Else, Case, Switches

6. Loops / Iterations: While-Do, Repeat Until, For-Do

7. Subroutines / Modules: functions, procedures

You are allowed use code from any sources but all sources must be acknowledged

Plagiarised assignments will receive a mark of zero. Any plagiarism will be reported to the Head of Department and a report will be added to your permanent academic record.

All code must include line by line comments explaining each line of code

1000 – 2000 word design document which details the implementation of the project: This document should detail the challenges encountered during the project and how they were overcome, screenshots/use of pseudocode/code examples are heavily encouraged.

## Timeline

This assignment is due 13th November 12p.m.

## Submission Process

Submission will be through moodle where you will submit your design document. You will link to your Github repository, ensuring that the repo is public and accessible to the lecturer

**Assignments that cannot be accessed through Github will not be graded**

Breakdown of grade:

Creativity 10%

Usability 15%

Design Document 25%

Functionality 35%

Coding Comments 15%

Late assignments are subject to the DkIT Continuous Assessment policy, as outlined here: <https://www.dkit.ie/registrars-office/academicpolicies/continuous-assessment-policy-procedures>.