**ASSESSMENT AND INTERNAL VERIFICATION FRONT SHEET (Individual Criteria)**

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| Course  Title | **Advanced Diploma** | | |  | **Lecturer Name & Surname** | **NEIL AQUILINA** | | |
| Unit Number & Title | | | **Programming for Computer Games** |  |  |  | | |
| Assignment Number, Title / Type | | | **Simple 2D Game – 24 Hour** |  |  |  | | |
| Date Set | | | 09/12/2020 | **Deadline Date** | **19/01/2021** |  | | |
| Student  Name | | Daniel Cini | | **ID Number** | **0194702L** |  | **Class / Group** | **4.2B** |

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| x | *Student’s declaration prior to handing-in of assignment:*  ❖ *I certify that the work submitted for this assignment is my own and that I have read and understood the respective Plagiarism Policy* | | | |
|  | ***Student’s declaration on assessment special arrangements (Tick only if applicable)***   * *I certify that adequate support was given to me during the assignment through the Institute and/or the Inclusive Education Unit.* * *I declare that I refused the special support offered by the Institute.* | | | |
| Student Signature: | | Daniel Cini | **Date :** | **26/02/2020** |

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| Assessment Criteria | Maximum Mark | Mark Achieved |
| *AA1: Examine and apply basic programming techniques for a simple game* | 45 |  |
| *AA2: Develop a game with graphical and audio assets* | 25 |  |
| *AA4: Apply coroutines for a more interesting gameplay* | 20 |  |
| *AA5: Examine and solve gameplay problems* | 10 |  |
| Total Mark | 100 |  |

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| **Assessor’s feedback to student** |
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| ***(If necessary, use reverse side of page for IV feedback on assignment brief / sample of assessment decisions)*** |

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|  | **Name & Surname** | **Signature** | **Date** |
| **Internal Verifier :** Approval of a*ssignment brief* |  | For approval signature, please refer to electronic audit trail |  |
| **Lecturer / Assessor :** Issue of results and feedback to student |  | For approval signature, please refer to electronic audit trail |  |
| **Internal Verifier :** Approval of *assessment decisions (Sample)* |  | For approval signature, please refer to electronic audit trail |  |
| **Learner’s signature upon collection of corrected assignment.** | |  |  |

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| Assessment Criteria |
| *AA1: Examine and apply basic programming techniques for a simple game* |
| *AA2: Develop a game with graphical and audio assets* |
| *AA4: Apply coroutines for a more interesting gameplay* |
| *AA5: Examine and solve gameplay problems* |

* This is a 24 Hour Home Assignment

* This Assignment is a Synoptic so the maximum mark you can achieve is 59

IICT4016 -

Programming for Computer Games

**Create a Simple 2D Game**

**Scenario: 2D Football Game**

You are to create a simple 2D Football Game where your goal is to move player around the pitch and shoot a ball towards goal.

The game:

Background music starts playing when the game runs and keeps on looping till the end.

You should be able to control the football player by the keyboard so that he can move around the pitch. When holding a mouse button down, the player starts shooting balls towards the goal (upwards).

For every goal he scores in the goal post, you get 1 point and an audio clip is played. Balls which end up out of the goal post should be destroyed when they leave the pitch.

Score is updated and visible in the Game Scene.

When reaching 20 points, a Winner Scene should be loaded automatically after a brief delay.

Tasks:

N.B.: you may refer to programs we did in class BUT variables, types and scripts should be different. Failure to do so will result in reduction of marks!

AA2:

1. Setup the game with 2 Scenes (Game and Win Scene). Set the camera as 9:16 aspect ratio – 5 marks

1. Use the given images as sprites, and audio as Game Objects and

Prefabs to be used correctly in the scene – 5 marks

1. Set boundaries around the pitch for non-scoring balls. Set a proper object in the goal posts. – 5 marks

1. Give proper Colliders to all GameObjects / Prefabs used in the game – 5 marks

1. Use proper Rigidbodies when needed. Make sure that gravity is arranged - 5 marks

Gameplay:

AA1 & AA4:

1. The game starts with a player which can move around the pitch using the keyboard – AA1 5 marks

1. When the game starts background music should start playing and it should keep going and looping even when scenes change
   * AA1 5 marks

1. When a mouse button is kept pressed, the player should start shooting a ball (spawning) every 2 seconds – AA4 5 marks

1. The balls should shoot upwards and randomly on the x-axis (in the range -2f and 2f) – AA4 10 marks

1. If the balls end in the top goal, 1 point is added to the Player Score, and Audio clip is played from the goalpost’s position and the ball is destroyed – AA1 15 marks

1. The Player Score update should be shown using UI Text
   * AA1 5 marks

1. When Player Score reaches 20, a Winner Scene (having Win UI

Text) should be loaded – AA1 5 marks

1. Winner Scene should be loaded 2 seconds after the score reaches

20 – AA4 5 marks

1. All the Colliders and RigidBodies in the view should be properly programmed and working correctly – AA1 5 marks

1. The balls which do not end up being scored should be destroyed once they leave the camera using the boundaries – AA1 5 marks Solve problems:

AA5:

1. Make sure that the football player stays within the boundaries of the camera – AA5 5 marks

1. When ready, upload your project folder on Github (using Commits on Github Desktop) as public and send the link to your lecturer. You should have at least 2 commits:

One commit when you start the project

Another commit when you finish the project

– AA5 5 marks

Assignment Rubric:

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| **Criteria and tasks** | **Marks** |
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| **AA2: Develop a game with graphical and audio assets** |  |
| Setup the game with 2 Scenes (Game and Win Scene). Set the camera as 9:16 aspect ratio | **5** |
| Use the given images as sprites, and audio as Game Objects and Prefabs to be used correctly in the scene | **5** |
| Set boundaries around the pitch for non-scoring balls. Set a proper object in the goal posts | **5** |
| Give proper Colliders to all GameObjects / Prefabs used in the game | **5** |
| Use proper Rigidbodies when needed. Make sure that gravity is arranged | **5** |
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| **AA1: Examine and apply basic programming techniques for a simple game** |  |
| The game starts with a player which can move around the pitch using the keyboard | **5** |
| When the game starts background music should start playing and it should keep going and looping even when scenes change | **5** |
| If the balls end in the top goal, 1 point is added to the Player Score, an  Audio clip is played from the goalpost’s position and the ball is destroyed | **15** |
| The Player Score update should be shown using UI Text | **5** |
| When Player Score reaches 20, a Winner Scene (having Win UI Text) should be loaded | **5** |
| All the Colliders and RigidBodies in the view should be properly programmed and working correctly | **5** |
| The balls which do not end up being scored should be destroyed once they leave the camera using the boundaries | **5** |
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| **AA4: Apply coroutines for a more interesting gameplay** |  |
| When a mouse button is kept pressed, the player should start shooting a ball (spawning) every 2 seconds | **5** |
| The balls should shoot upwards and randomly on the x-axis (in the range -2f and 2f) | **10** |
| Winner Scene should be loaded 2 seconds after the score reaches 20 | **5** |
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| **AA5: Examine and solve gameplay problems** |  |
| Make sure that the football player stays within the boundaries of the camera | **5** |
| When ready, upload your project folder on Github (using Commits on Github Desktop) as public and send the link to your lecturer. You should have at least 2 commits:    One commit when you start the project    Another commit when you finish the project | **5** |
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| **TOTAL MARKS** | **100** |
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