


ASSESSMENT AND INTERNAL VERIFICATION FRONT SHEET (Individual Criteria)

Course Title	Advanced Diploma		Lecturer Name & Surname	NEIL AQUILINA	
Unit Number & Title	Programming for Computer Games				
Assignment Number, Title / Type	Research and Design – Home (24 Hours)				
Date Set	18/12/2020	Deadline Date	19/12/2020		
Student Name	Mikael Zammit	ID Number	0003403	Class / Group	MSD-4.2B

<input type="checkbox"/>	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
<input type="checkbox"/>	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.
<input type="checkbox"/>	❖ I declare that I refused the special support offered by the Institute.
Student Signature:	<div>  </div>
Date :	18/12/2002

Assessment Criteria	Maximum Mark	Mark Achieved
KU1: Identify and describe different game engines for different tasks	5	
KU3: Describe file types for media assets	5	
KU4: State the relevance of compression settings in media assets	5	
SE1: Design and specify the details of the game to be developed, including a state machine	10	
Total Mark	25	

Assessor's feedback to student (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 <u>assignment brief</u>		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 <u>assessment decisions</u> (Sample)		For approval signature, please refer to electronic audit trail	
Learner's signature upon collection of corrected assignment.			

Assessment Criteria
<i>KU1: Identify and describe different game engines for different tasks</i>
<i>KU3: Describe file types for media assets</i>
<i>KU4: State the relevance of compression settings in media assets</i>
<i>SE1: Design and specify the details of the game to be developed, including a state machine</i>

PCG 24hr Assignment

Task 1: Game Engines

Unity:

- Programming Language – C#/C++
- Game Produced by engine – Among Us
- Unity is both 2D/3D engine

Frostbite:

- Programming Language – C++/C#
- Game Produced by Engine – Need for Speed
- Frostbite is both 2D/3D engine

Unreal engine

- Programming Language – C++
- Game Produced by Engine – Fortnite
- Unreal engine is both 2D/3D

GameMaker

- Programming Language – C++/Pascal
- Game Produced by Engine – Spelunky
- GameMaker is both 2D/3D

CryEngine

- Programming Language – C++/C#/LUA
- Game Produced by Engine – Far Cry
- CryEngine is both 2D/3D

Task 2: File types for media assets

PNG, JPG, GIF

a)

- PNG – PNG stands for Portable Network Graphics. PNG is very used because it is known as lossless image compression type which means that the image does not lose its quality while compressed. A bigger file can be created because the quality can increase file size.
- JPG – JPG is also referred as JPEG. This is a very popular file and it supports high quality, this is a lossy type image compression file. You can save photoshop and illustrator images as JPG as well as downloading the images online. It has a smaller file size than PNG but not a good quality graphics.
- GIF – GIF is a very interesting file format because it supports animation file and normal images as well. It is a lossless image compression so the quality is there. It is a very unique file because it is the most popular file to save short videos and animations. For example if you create an animation from a sprite sheet it can be saved as gif.

MP3, WAV

b)

- MP3 is very used because it is one of the formats that provides a very good quality sound, it can compress files, it has a very popular and versatile way of storing music. It is a lossless file format that is why it a quality file format.
- WAV is a Waveform audio file format. WAV is developed by IBM (International Business Machines Corporation) and Microsoft for storing Bitstream audio on your device especially PC's. It is a high quality audio and lossless as well, WAV file size is meant to be big in size

Task 3: Compression in multimedia

- a) The compression of images is important for the storage. This is because more images can be stored in the storage used. It also helps in the time consummation especially because when downloading or uploading if the file is smaller it will travel faster in download or in upload, and if the file is big it will take much more time. It is important as well that we notice if they are lossy or lossless because from the advantage of time consuming and storage it can be a disadvantage by losing quality if it is lossy, so For example: Chose PNG if you are looking for a good quality, but a bigger file or choose JPG if you are looking for small file size and a faster download, but no a good quality as the PNG.

