**3D Virtual Environments and Applications  
Document template**The purpose of this document is to help you structure the documentation related to your final project. You can also include screenshots (eg. Material node graphs, pictures of mesh models, etc).  
  
Descriptions can be brief, for example, lighting of a scene can be described as “*The scene contains a directional light to simulate sunlight. A hemispherical ambient light is used to simulate indirect lighting. The hemispherical light utilizes a cubemap for color definition. Other lights consist of static spotlights placed in various interior locations to provide atmosphere. Baked lighting is utilized, however there are also occasional dynamic lights placed in key locations to provide real time shadowing. The dynamic lights utilize IES profiles.”.*

**PROJECT DESCRIPTION**

**Introduction**  
Give a brief overall description of your project.

**Environment**A brief description of your virtual environment.  
Did you model it inside/outside of the game engine or in a modeling software  
Use of terrain/landscape system  
Lighting (what type of lights does it contain, use of dynamic/and or static lights)  
Other scene objects

**Player character**A brief description of your player character  
1st or 3rd person  
Origin of the model (template/downloaded from somewhere/self-modeled)  
Animations

**Materials/shaders**A brief description of materials you made yourself  
What texture maps does it consist of and how were they made (downloaded/photoshop/substance etc)  
Description of PBR workflow utilized (metalness, roughness definitions etc.)  
Additional operations/properties

**Animations**A brief description of animations you made yourself  
Keyframe and/or skeletal?  
Are the animations cinematics or animated objects in the environment  
How did you make them (modeling software, game engine timeline editor, mocap etc.)

**Mesh models**A brief description of mesh models created by you  
Which software did you utilize  
Are there collision definitions or physics properties

**NPCs**A brief description of NPCs  
Origin (downloaded/self modelled)  
Description of AI (what are they doing. How did you accomplish it eg. Scripting/state-machines/behavior trees)

**Interactions**Interaction techniques  
Interaction mechanisms

**Audio**A brief description of your sound design process (spotting, intended atmosphere etc.)Diegetic sounds  
Non-diegetic sounds  
Dynamic sounds  
Nondynamic sounds  
Origin (self-recorded/self-synthesized or downloaded from somewhere)

**Performance optimization**A brief description of optimizations/performance related design choices

**Generative AI**If you utilized generative AI in any way, please describe what you did here.

**LEARNING DIARY - helping questions *(****This part of the documentation is optional, however it may earn you extra points.)*

Please reflect on your learning throughout this course. You can use any, or all of the questions below or create your own structure.

**Starting level - how experienced were you in game engines when starting this course?**

**What did you expect to learn and what did you actually learn?**

**What went well in your project? What didn’t go too well?**

**Were there any particular aspects of the project in which you spent considerable time implementing, but couldn’t get working well enough to use it for the final deliverable?**

**What would you like to add if there were more time to implement?**

**Was the project too easy, too difficult, or something in between?**

**The most interesting and the most boring aspect of the course/project assignment.**