

# COMP1150/MMCC1011 Game Design Task Report

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<b>GitHub Repo (link):</b>	<a href="https://github.com/COMP1150-24s1/comp1150-gdt-2024-dvidmichelleee.git">https://github.com/COMP1150-24s1/comp1150-gdt-2024-dvidmichelleee.git</a>

## Instructions:

Look at the “**Element Descriptions Table**” at the end of this document (page 30). This describes the elements which you implement to get marks for in this assessment. Three (3) of these elements are **mandatory**, Indoor Environment, Outdoor Environment, and First-Person Controller. These three make up 50% of your claimable marks.

The rest of the elements listed (Element 04 - Element 19) are optional and worth 5% each. You can choose to implement **up to ten (10) optional elements** (as this will total the remaining 50% of your claimable marks).

Enter the elements you are claiming (have chosen to implement) into the **Claimed Elements Table** (page 3). **Note:** there are enough rows for you to claim the mandatory elements and up to ten (10) optional elements.

For each claimed element, you must **complete the corresponding entry in the section Scene Breakdown** (page 4). You will not receive marks for a feature that is not documented in your submitted report. Additionally, features will not receive marks if they cannot be easily located within your scene and hierarchy.

If you require more space to in a section to document an element, you can add extra tables in as needed (copy and paste provided ones to keep the structure). You do not need to go into too much detail in your descriptions, an example of a good level of detail has been provided for you in the sections **Scene Overview** (page 4) and **Element 01 – First-Person Controller** (page 4), as well as in the **example GDT Report** which you can find on iLearn.

You are allowed to import (add) 3<sup>rd</sup> party Texture assets (image files) or Music/SFX assets (audio files), so long as they comply with the **file type limits** and **size requirements** (see iLearn GDT assessment outline for details) **AND** you have a **license** to use them. Copyright violation is a breach of academic integrity and will be treated appropriately. You should add a subfolder called ‘**Licenses**’ and include a copy of the licenses for any imported 3<sup>rd</sup> party assets.

All 3<sup>rd</sup> party assets used in your scene (including those provided in the Standard Assets folder) should be referenced in the section **Assets Used** (page 27). Failure to have the necessary licenses (i.e., a copyright violation) or reference the 3<sup>rd</sup> party assets you use is a **breach of academic integrity** and will be treated appropriately.

Ensure your completed report is both saved in your assignment repository (on GitHub) **AND** submitted via the Game Design Task submission link on iLearn. Submission of this report via iLearn will notify the markers that your Game Design Task GitHub repository is ready to be marked, so only submit once you are happy for your repo to be marked.

If you intend to submit late, after the due date, but have already uploaded a report to iLearn, please email Kayson and Malcolm informing us of this. Otherwise, we will assume your uploaded report means you are ready to have your project marked and we will mark report and project at the state it was in at the time of the deadline.

## Claimed Elements Table

Complete the following table for the elements which you have implemented (from the **Element Descriptions Table** on page 30).

**NOTE:** Only claim up to **ten (10) optional elements** from the list. Doing more than 10 optional elements will not increase your mark. Elements will only be marked up to a max of 100% marks, and will be marked in order of the Element IDs (i.e., order in the **Element Descriptions Table** on page 30), so don't claim anything in your GDT Report that you don't want assessed!

Claimed Element ID	Claimed Element	Marks
01	First-Person Controller (mandatory)	N/A - Provided
02	Outdoor Environment (mandatory)	25%
03	Indoor Environment (mandatory)	25%
04	Indoor Textures	5%
05	Height & Normal Maps	5%
06	Physics Objects	5%
07	Physics with Joints	5%
08	Direct Sources	5%
13	Audio Source	5%
09	Baked Indirect Lighting	5%
19	Particle System	5%
	<b>Total:</b>	90%

## Scene Breakdown


### Scene Overview

**Note:** This has been completed as an example. Please clear the entry and provide your own answers relevant to your scene.

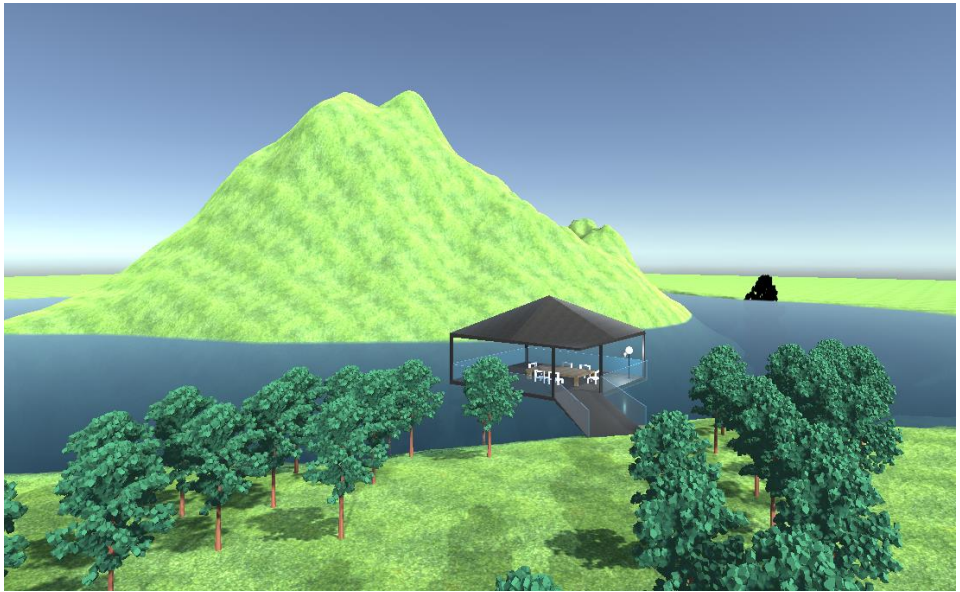
Scene Overview	
Scene Theme Aim:	Modern Rest/Vacation House
Theme Summary / Goal / Targeted Player experience(s):	I want players to explore my scene feeling relaxed and immersed in a quiet and peaceful environment surrounded with nature.

### Element 01 – First-Person Controller

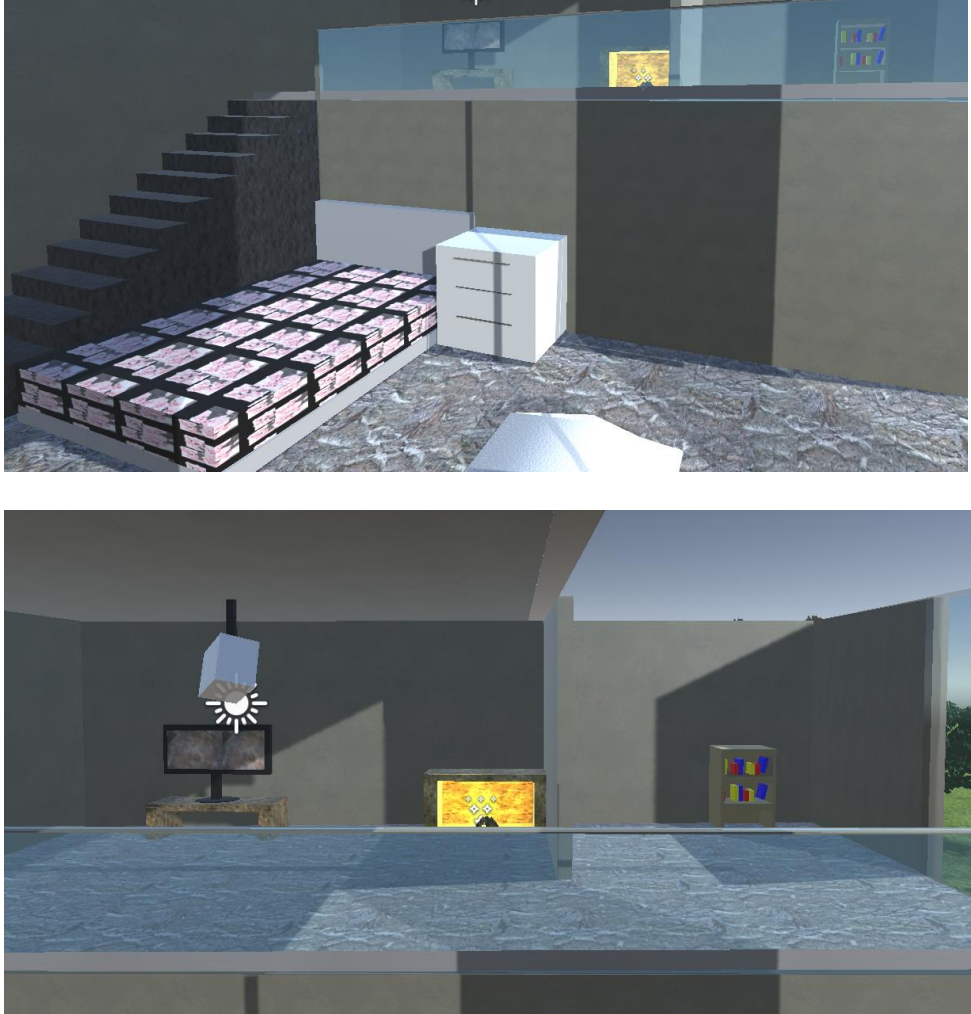
**Note:** This table has been completed as an example. Please clear the entry and provide your own answers relevant to your scene.

Element 01 – First-Person Controller	
Claimed:	Yes
Placement within Scene:	In front of the house, in the middle part of the map
Name in Hierarchy:	Player
Location in Hierarchy:	Top-level
Purpose within scene:	The First-Person Controller allows the player to explore the scene from a first-person perspective. It is placed in front of the building so that it gets a good view of the indoor and outdoor environment, making it a lot easier for the player to navigate the scene.
Screenshot :	

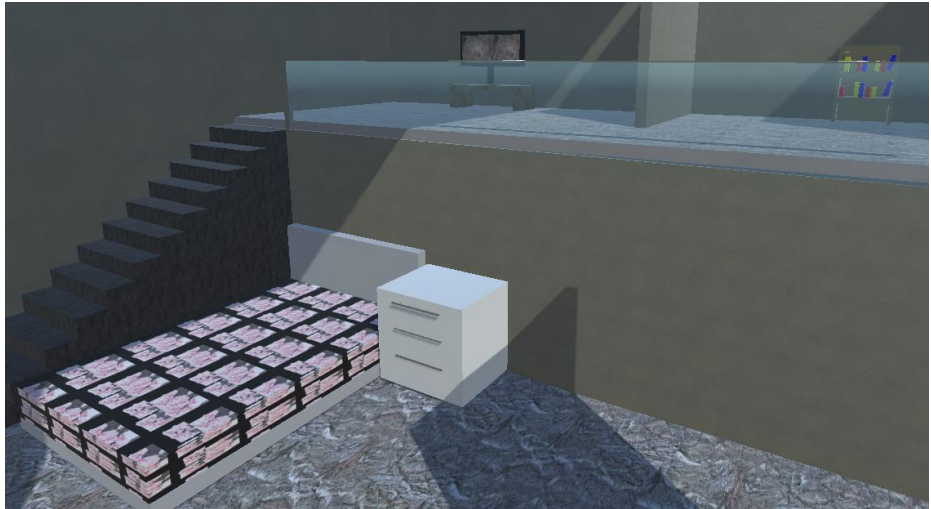
## Element 02 – Outdoor Environment

Element 02 – Outdoor Environment	
Claimed:	Yes
Placement within Scene:	The Terrain Lake and Gazebo area
Name in Hierarchy:	Terrain Lake
Location in Hierarchy:	Environment/TerrainGroup_0/ Environment/
Purpose within scene:	The terrain provides the natural landscape for the scene, designed with mountains, water, and trees. The lake and gazebo area offer a serene setting that aims for relaxation and exploration of the player.
Screenshot:	

## Element 03 – Indoor Environment


Element 03 – Indoor Environment	
Claimed:	Yes
Placement within Scene:	Inside the house
Name in Hierarchy:	Indoor
Location in Hierarchy:	Environment/
Purpose within scene:	The indoor environment provides players with a spacious and relaxing living space, with books and televisions for entertainment.
Screenshot:	

## Element 04 – Indoor Textures

Element 04 – Indoor Textures	
Claimed:	Yes
Placement within Scene:	The textures are applied throughout the exterior of the house, particularly focusing on the walls, floor tiles, and stairs.
Name in Hierarchy:	House Interior
Location in Hierarchy:	Environment/Indoor/
Purpose within scene:	Adds realism to the living space and highlights the modern design of the space
Screenshot:	



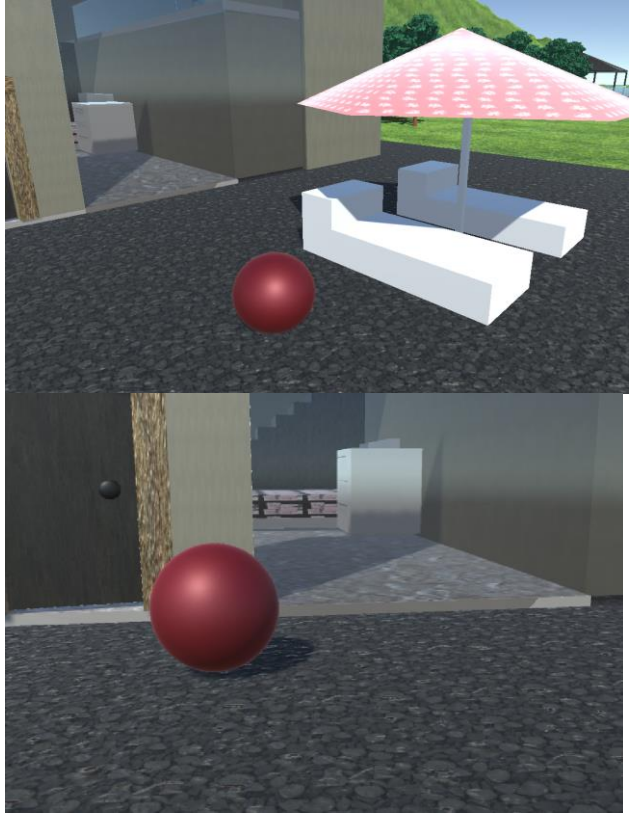
## Element 05 – Height & Normal Maps

Element 05 – Height & Normal Maps	
Claimed:	Yes
Placement within Scene:	The door frame and the ground uses textures, height maps, and normal maps to simulate a wood texture and a pebble texture, respectively.
Name in Hierarchy:	Door Frame Ground
Location in Hierarchy:	Environment/Indoor/Door/ Environment/
Purpose within scene:	Adds extra depth to the textures within my scene and enhances the realism of the door frame. It simulates the roughness of the wood and ground material.
Screenshot:	

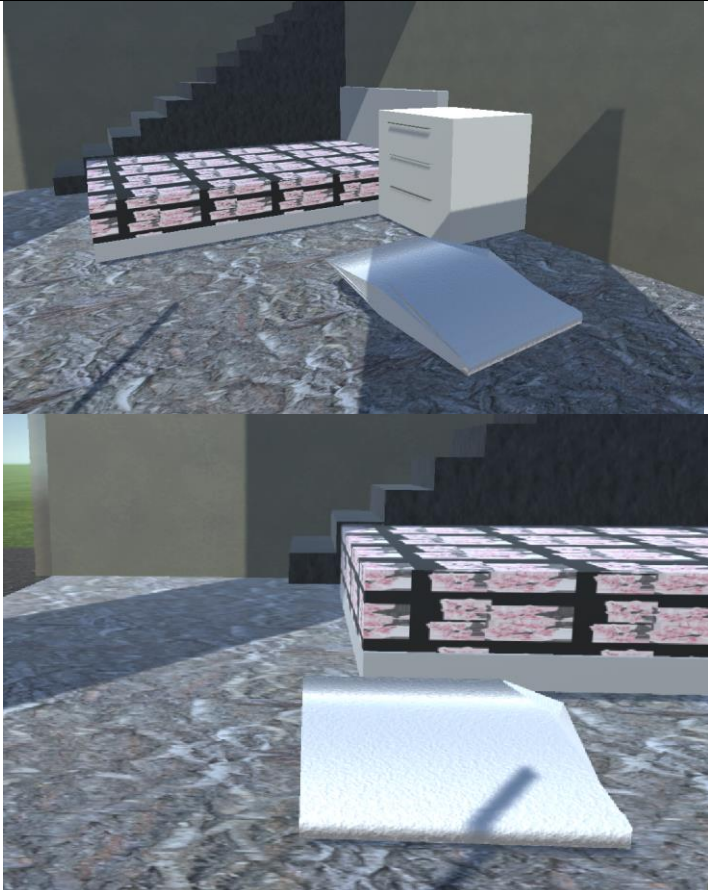


## Element 06 – Physics Objects


### Physics Object 1

Element 06 – Physics Objects – Physics Object 1	
Claimed:	Yes
Placement within Scene:	In the outdoor lounge area, designed to be moved around by the player.
Name in Hierarchy:	Ball
Location in Hierarchy:	Environment/Outdoor/Outdoor Decors/Items/
Purpose within scene:	The purpose of the inflatable ball is to provide an interactive element for the player and enhance engagement within the scene.
Screenshot:	 The first screenshot shows a red inflatable ball on a dark, textured ground in an outdoor lounge area. In the background, there is a white modular sofa, a pink and white striped umbrella, and a building with a large window. The second screenshot shows the same red inflatable ball from a different angle, positioned near a dark door and a wall.

## Physics Object 2


Element 06 – Physics Objects – Physics Object 2	
Claimed:	Yes
Placement within Scene:	Next to the bed, on the floor, designed to be moved around by the player.
Name in Hierarchy:	Pillow
Location in Hierarchy:	Environment/Indoor/Furnitures/
Purpose within scene:	To add a realistic and interactive element to the indoor environment, providing additional engagement for the player.
Screenshot:	 <p>The first screenshot shows a white pillow lying on a bed with a pink and white checkered pattern. The bed is on a dark, textured floor. In the background, there is a white dresser and a staircase. The second screenshot shows the same scene from a different angle, with the pillow in the foreground and the bed behind it.</p>

## Element 07 – Physics with Joints

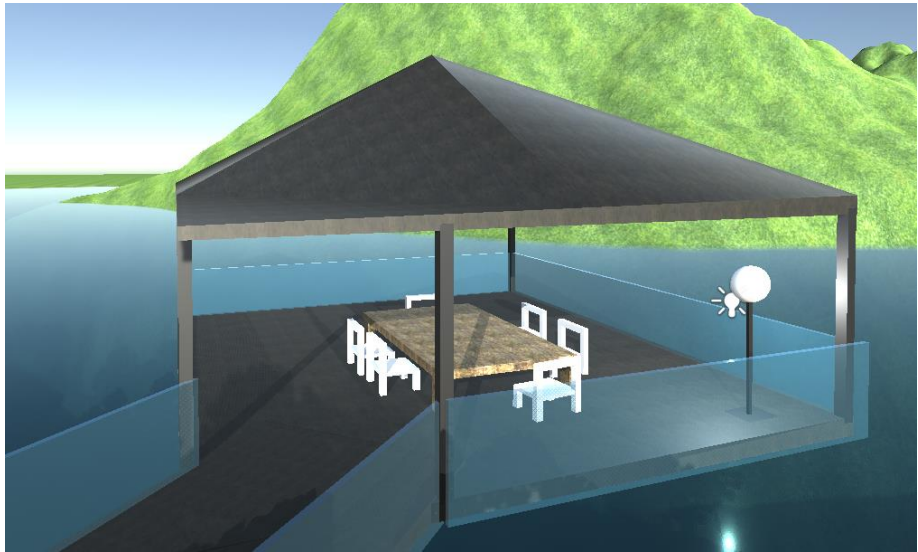
Element 07 – Physics with Joints	
Claimed:	Yes
Placement within Scene:	In front of the house, the door has rigidbody components and rotate around a hinge to allow payer to enter and exit the house.
Name in Hierarchy:	Door
Location in Hierarchy:	Environment/Indoor/
Purpose within scene:	To add an interactive door affected by physics wherein the it can be pushed open and exit to enter and leave the house.
Screenshot:	 A screenshot of a dark wooden door with a black handle, set within a rustic wooden frame against a grey wall. The door is closed and centered in the frame. The floor in front of the door is made of dark, irregular stones.

## Element 08 – Direct Light Sources


### Direct Light Source 1

Element 08 – Direct Light Sources – Direct Light Source 1	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	Mounted on the ceiling, illuminates the area.
Name in Hierarchy:	Box Light
Location in Hierarchy:	Environment/Indoor/Furnitures/Ceiling Light/
Purpose within scene:	To add lighting to the deck area so that the player can explore the indoor area with better lighting.
Screenshot:	

## Direct Light Source 2

Element 08 – Direct Light Sources – Direct Light Source 2	
Claimed:	Yes
Placement within Scene:	In the gazebo, providing extra lighting.
Name in Hierarchy:	Ball Light
Location in Hierarchy:	Environment/Indoor/Gazebo/Stand Light/
Purpose within scene:	To add lighting to the gazebo area so the player can see it better.
Screenshot:	

## Element 09 – Baked Indirect Lighting

Element 09 – Baked Indirect Lighting	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	In the wood fireplace, inside the house
Name in Hierarchy:	Fire
Location in Hierarchy:	Environment/Indoor/Furnitures/Fireplace
Purpose within scene:	To create the orange glow of the fire inside the fire place.
Screenshot:	 A 3D rendered scene showing a fireplace. The fireplace is made of dark, textured stone or brick. Inside the fireplace, there is a bright, glowing fire with orange and yellow flames. The fire is positioned on a small pile of dark logs. The background is a dark, solid color, and the floor in front of the fireplace is a light blue, textured surface. The lighting is soft and warm, emanating from the fire.

## Element 10 – Light-Probes

Element 10 – Light-Probes	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	



## Element 11 – Reflection-Probes & Reflective Surfaces

Element 11 – Reflection-Probes & Reflective Surfaces	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Element 12 – Multiple Cameras

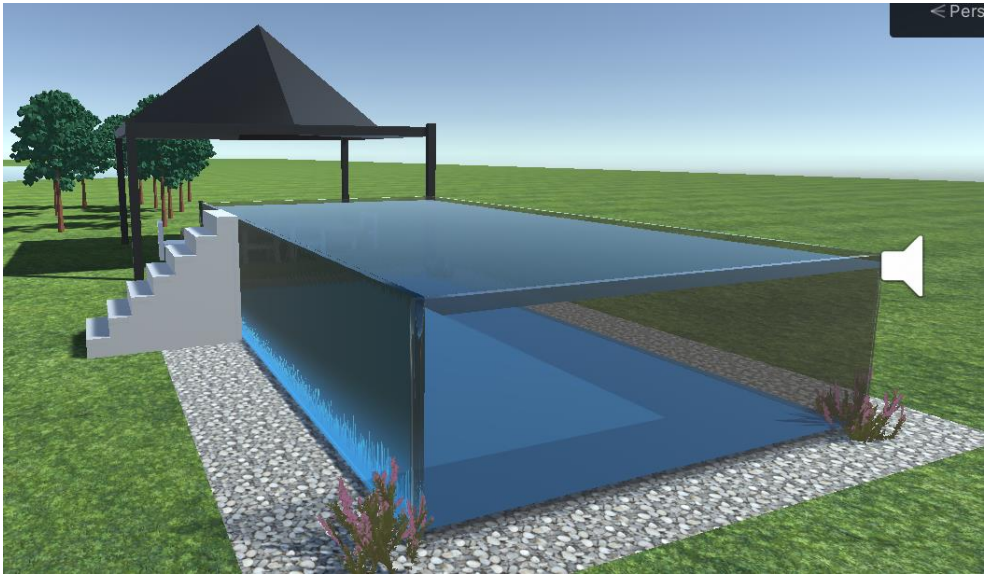
### Camera 1

Element 12 – Multiple Cameras – Camera 1	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Camera 2

Element 12 – Multiple Cameras – Camera 2	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Element 13 – Audio Source

Element 13 – Audio Source	
Claimed:	Yes
Placement within Scene:	By the pool area, specifically in pool water, to simulate the sound of water coming from the pool.
Name in Hierarchy:	Pool Water
Location in Hierarchy:	Environment/Outdoor/Swimming Pool/
Purpose within scene:	To add a realistic sound effect to the pool area, enhancing the player's immersion to the scene.
Screenshot:	

## Element 14 – Audio Reverb Zones, Effects and Filters

### Audio Element 1

Element 14 – Audio Reverb Zones, Effects and Filters – Audio Element 1	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Audio Element 2

Element 14 – Audio Reverb Zones, Effects and Filters – Audio Element 2	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Element 15 – Global Post-Processing Effect

Element 15 – Global Post-Processing Effect	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	



## Element 16 – Local Post-Processing Effect

Element 16 – Local Post-Processing Effect	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	


## Element 17 – Single-State Animation

Element 17 – Single-State Animation	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Element 18 – Multi-State Animation

Element 18 – Multi-State Animation	
Claimed:	Yes / No (if 'No' then skip to next section)
Placement within Scene:	
Name in Hierarchy:	
Location in Hierarchy:	
Purpose within scene:	
Screenshot:	

## Element 19 – Particle System

Element 19 – Particle System	
Claimed:	Yes
Placement within Scene:	In the wood fireplace, inside the house
Name in Hierarchy:	Fire
Location in Hierarchy:	Environment/Indoor/Furnitures/Fireplace
Purpose within scene:	The fire particle system used in the fireplace is designed to bring warmth and coziness to the indoor area.
Screenshot:	 A 3D-rendered fireplace with a fire burning inside. The fireplace is made of dark, textured wood or stone. The fire is bright yellow and orange, with two distinct flames. The fireplace is set against a dark background, and the floor in front of it is a dark, textured surface.

## Assets Used

If you include **any** 3<sup>rd</sup> party assets in your scene (including the which were provided in the Standard Assets folder) then you **must** reference them appropriately below, including the file path of where they were found (for provided assets in the Standard Assets folder) or a web link (for any imported texture or music/sfx assets).

### Texture Assets Used

**Note:** This table has been completed as an example. Please clear the entry and provide your own answers relevant to your scene.

Usage	3 <sup>rd</sup> Party Asset	Author	Path/Link
Element 04 – Texture for stairs	height.jpg	Provided Standard Assets	Assets/Standard Assets/Textures/Grass/height.jpg
Element 04 – Texture for walls	PT_Ground_Generic_03.png	Provided Standard Assets	Assets/Standard/Polytop Studio/Lowpoly_Environments/Sources/Textures/PT_Ground_Generic_03.png
Element 03 – Texture for TV screen display	Cap_01.tga	Provided Standard Assets	Assets/StandardAssets/Environment/SpeedTree/Broadleaf/Cap_01.tga
Element 03 – Texture for wood (used in wooden tables and fireplace)	bark.png	Provided Standard Assets	Assets/StandardAssets/Waldemarst/JapaneseGardenPackage/Prefabs/JapaneseMapleTree_B_Textures/bark.png
Element 03 – Texture for bed	atlas.png	Provided Standard Assets	Assets/StandardAssets/Waldemarst/JapaneseGardenPackage/Prefabs/SakuraTree_C_Textures/atlas.png
Element 02 – Texture for ground and outdoor tiles	brocco_jg_pebbles.jpg	Provided Standard Assets	Assets/StandardAssets/Waldemarst/JapaneseGardenPackage/Textures/brocco_jg_pebbles.jpg
Element 02 – Texture for umbrella	billboard_normal.png	Provided Standard Assets	Assets/StandardAssets/Waldemarst/JapaneseGardenPackage/Prefabs/JapaneseMapleTree_D_Textures/billboard_normal.png
Element 04 – Texture for floor tiles	BroadleafBark.tga	Provided Standard Assets	Assets/StandardAssets/Environment/SpeedTree/Broadleaf/BroadleafBark.tga

### Music/SFX Assets Used

**Note:** This table has been completed as an example. Please clear the entry and provide your own answers relevant to your scene.

Usage	3rd Party Asset	Author	Path/Link
Element 13 – Spatialised pool water sounds	559462__klankbeeld__winter-lake-nl-long-210108_0212.ogg	klankbeeld	<a href="https://freesound.org/s/559462/">https://freesound.org/s/559462/</a> Assets/StandardAssets/ImportedAssets/559462__klankbeeld__winter-lake-nl-long-210108_0212.ogg

### Models Assets Used

**Note:** This table has been completed as an example. Please clear the entry and provide your own answers relevant to your scene.

Usage	3rd Party Asset	Author	Path

### Script Assets Used

**Note:** This table has been completed as an example. Please clear the entry and provide your own answers relevant to your scene.

Usage	3rd Party Asset	Author	Path

### Other Assets Used

Usage	3rd Party Asset	Author	Path
	Heather_A.prefab	Provided Standard Assets	

Usage	3rd Party Asset	Author	Path
Element 02 – Water material for pool and lake water	PT_Water_mat.mat	Provided Standard Assets	Assets/StandardAssets/TerrainSampleAssets/Prefabs/Heather_A.prefab
Element 05 – Door that was enhanced with textures, height, and normal maps	Door.prefab	Provided Standard Assets	Assets/StandardAssets/Interactivity/Door.prefab
Element 02 – Trees for designing the terrain	bigLeavesTreeVariant.prefab	Provided Standard Assets	Assets/StandardAssets/polygonTrees/polygonTrees/prefabs/tree/trees/bigLeavesTree Variant.prefab



## Element Descriptions Table

Element ID	Element	Description	Skill Group	Week Covered	Marks	Optional?
01	First-Person Controller	A <b>First-Person Controller</b> for the player to navigate the scene with.	Navigation	Week 06	N/A – Provided	Mandatory
02	Outdoor Environment	An <b>outdoor</b> section built using the Terrain editor (and dressed/painted appropriately with terrain elements).	Terrain	Week 07	25%	Mandatory
03	Indoor Environment	A dressed/furnished <b>indoor</b> section constructed using <a href="#">ProBuilder</a> and/or Unity primitives (cubes, spheres, etc).	Primitives & ProBuilder	Week 06 Week 08	25%	Mandatory
04	Indoor Textures	Appropriate <a href="#">textures</a> applied to the indoor environment of your scene. <b>NOTE:</b> Cannot be claimed if <b>Element 03</b> (Indoor Environment) has not been implemented/claimed.	Meshes & Textures	Week 06	5%	Optional
05	Height & Normal Maps	<a href="#">Height maps and normal maps</a> have been applied appropriately to the textures of the indoor environment in your scene. <b>NOTE:</b> Cannot be claimed if <b>Element 04</b> (Indoor Textures) has not been implemented/claimed.	Meshes & Textures	Week 06	5%	Optional
06	Physics Objects	At least two (2) objects which demonstrate <a href="#">physics</a> .	Physics	Week 03 Week 05 Week 12	5%	Optional
07	Physics with Joints	At least one (1) object which uses a physics system with <a href="#">joints</a> . <b>NOTE:</b> Cannot be claimed if <b>Element 06</b> (Physics Objects) has not been implemented/claimed.	Physics	Week 03 Week 05 Week 12	5%	Optional
08	Direct Light Sources	Minimum two (2) direct <a href="#">light sources</a> . Does not include the default Directional Light provided in the scene.	Lighting	Week 10	5%	Optional
09	Baked Indirect Lighting	<a href="#">Baked indirect lighting</a> used in the indoor section of your scene. <b>NOTE:</b> Cannot be claimed if <b>Element 08</b> (Direct Light Sources) has not been implemented/claimed.	Lighting	Week 10	5%	Optional

Element ID	Element	Description	Skill Group	Week Covered	Marks	Optional?
10	Light-Probes	Use of <a href="#">light-probes</a> for dynamic indirect lighting. <b>NOTE:</b> Cannot be claimed if <b>Element 09</b> (Baked Indirect Lighting) has not been implemented/claimed.	Lighting	Week 10	5%	Optional
11	Reflection-Probes & Reflective Surfaces	Appropriate use of <a href="#">reflection-probes</a> and reflective surfaces in outdoor environment of your scene.	Lighting	Week 10	5%	Optional
12	Multiple Cameras	Use of <a href="#">multiple cameras</a> (at least two (2) excluding the provided First-Person Controller camera). For example, overlaid cameras or rendering to a texture.	Cameras & Rendering	Week 09	5%	Optional
13	Audio Source	At least one (1) appropriate 3D spatialised <a href="#">audio source</a> within your scene.	Sound	Week 03	5%	Optional
14	Audio Reverb Zones, Effects and Filters	Use of at least two (2) of the following within your scene: <ul style="list-style-type: none"> <li>• <a href="#">Audio reverb zones</a></li> <li>• <a href="#">Audio effects</a></li> <li>• <a href="#">Audio filters</a></li> </ul>	Sound	Week 03	5%	Optional
15	Global Post-Processing Effect	An appropriately chosen <a href="#">post-processing effect</a> for your scene using a global <a href="#">volume</a> .	Cameras & Rendering	Week 09	5%	Optional
16	Local Post-Processing Effect	An appropriately chosen <a href="#">post-processing effect</a> for your scene using a local (trigger) <a href="#">volume</a> .	Cameras & Rendering	Week 09	5%	Optional
17	Single-State Animation	A simple single-state <a href="#">animation clip</a> .	Animation	Week 04 Week 06	5%	Optional
18	Multi-State Animation	A <a href="#">multi-state animation</a> that responds to trigger or mouse events.	Animation & Interactivity	Week 12	5%	Optional
19	Particle System	At least one (1) <a href="#">particle system</a> appropriately placed within your scene.	Particle Systems	Week 11	5%	Optional