**University of Ottawa**

****

**GNG 1103: Engineering Design**

**Deliverable F – Project Plan and Cost**

**Presented to:**

Dr. David Nox

**Presented by Group 14:**

Wissal Assi – 300146551

Xiyu Bo – 300188288

Jacob Nolan – 300337194

Milo Murillo – 300381208

Chiemelie Osigwe – 300325153

October 29, 2023

Table of Contents

[Introduction: 2](#_Toc150113858)

[Feedback Use: 3](#_Toc150113859)

[Analysis of critical components 3](#_Toc150113860)

[Prototype Images: 4](#_Toc150113861)

[Test Plan: 6](#_Toc150113862)

[Analysis: 6](#_Toc150113863)

[Results: 7](#_Toc150113864)

[Feedback and comments 7](#_Toc150113865)

[Prototyping test plan 7](#_Toc150113866)

[Conclusion: 9](#_Toc150113867)

# List of Tables

[Table 1:Prototyping test plan for our prototype 2 7](#_Toc150113893)

# List of figures

[Figure 1:Prototype images 6](#_Toc150113915)

# Introduction:

The purpose of this deliverable is to document and analyse the first prototype, and the same for feedback received from both the client and other users. Screenshots of the first prototype are provided, along with an analysis of the components used in the prototype, along with the testing of the prototype. There is also a prototype test plan for the 2nd prototype.

# Feedback Use:

Solution 1 was selected as the best out of the 3 proposals. It was the best at addressing the issue while simultaneously meeting the criteria of feasibility within the next 40 days. We were advised to keep things as simple as possible by:

* Getting rid of unnecessary scenes,
* Using only 1 location,
* Avoiding time jumps,
* Minimizing moving things and objects present,
* Utilizing minimal storytelling approaches like radios and posters,
* Ensuring the general story can be told in less than 20 seconds.

All recommendations and feedback will be used to inform future design choices and improve our proposed solution. For example, we were advised not to add things that contribute nothing to the story. Therefore, we will aim at weeding out unnecessary components to avoid more coding work that will stop us from reaching our goal.

**Why:** We conduct these tests to verify that the prototype functions effectively, aligns with the client's requirements (addressing issues and delivering a positive user experience), and complies with specifications. This validation is achieved through prototype trials, which involve testing the prototype with potential users, running programs, assessing assets and animations, conducting compatibility tests, and more.

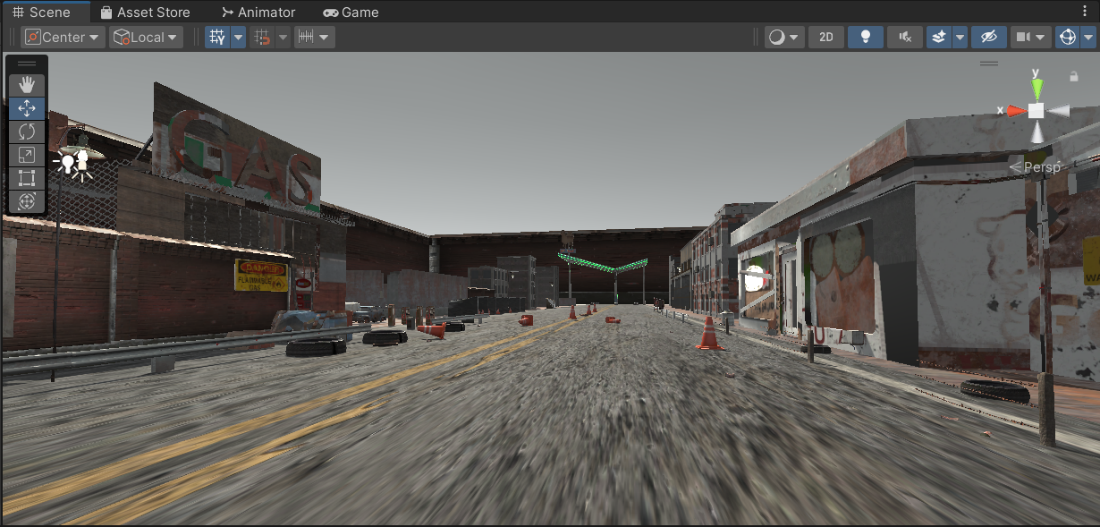
**What:** The prototypes consist of camera movements and animations. Animation prototypes will undergo testing to detect object collisions and verify that specific actions occur as expected. For camera movement, tests involve confirming that the camera view is in the correct position and ensuring there are no obstructions. Lastly, the comprehensive prototype testing encompasses ensuring that all other components operate harmoniously.

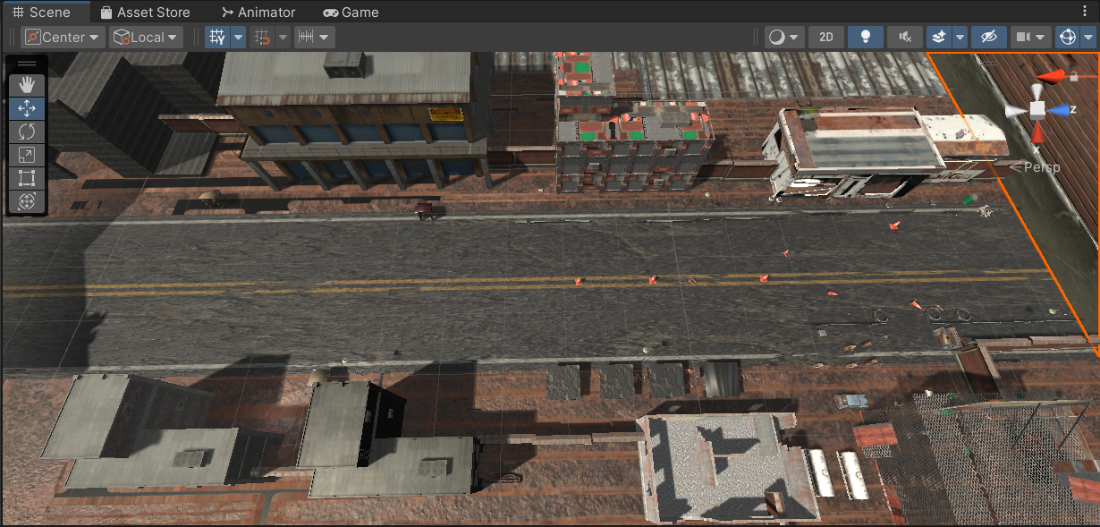
**When**: A new prototype will be developed each time we test and receive feedback from our Teaching Assistant (TA), Professor, and clients.

# Analysis of critical components

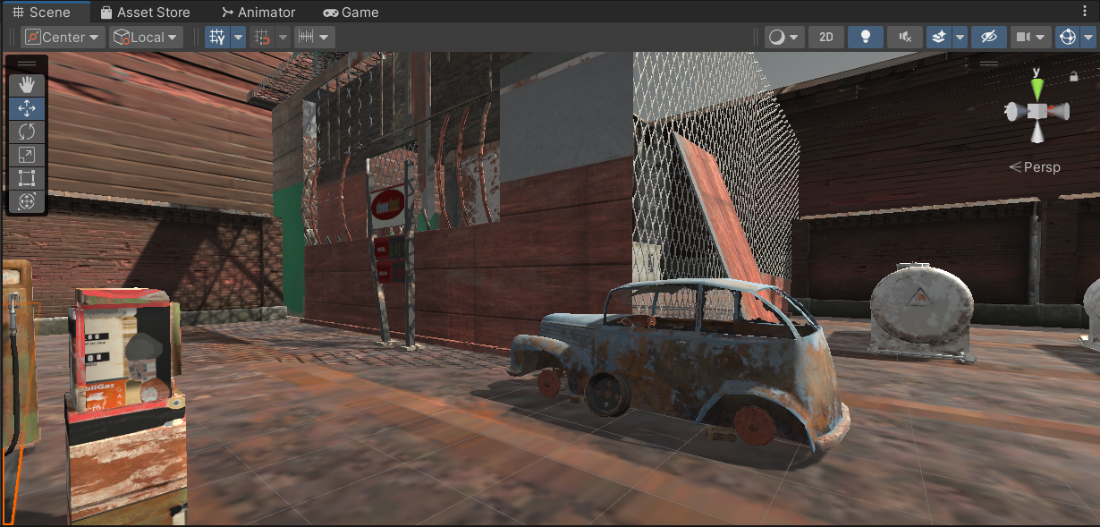
* Buildings
  + The buildings should be badly maintained to show that the people are staying in their houses because they are scared.
* Posters/signs
  + They should be easy to see for the user (bright colors such as yellow for a warning, red for propaganda)
  + Warning signs should worry the user by making them look out for robots
  + Propaganda signs should make the user understand the influence of robots by having them make a connection between robots and political/societal influence.
* Animations
  + The human animations should make sense in respect to human emotion by making them do things that real humans would do in times of stress. In this case, they should show that the humans are scared.
  + The robot animations should be very nonhuman and linear, to show the harsh difference between humans and killer robots
* Lighting
  + The lighting should be clear enough to see, and maybe clearer at important places (e.g. posters/signs). However, it should also be gloomy enough to cause a sense of dread in the user.

# Prototype Images:













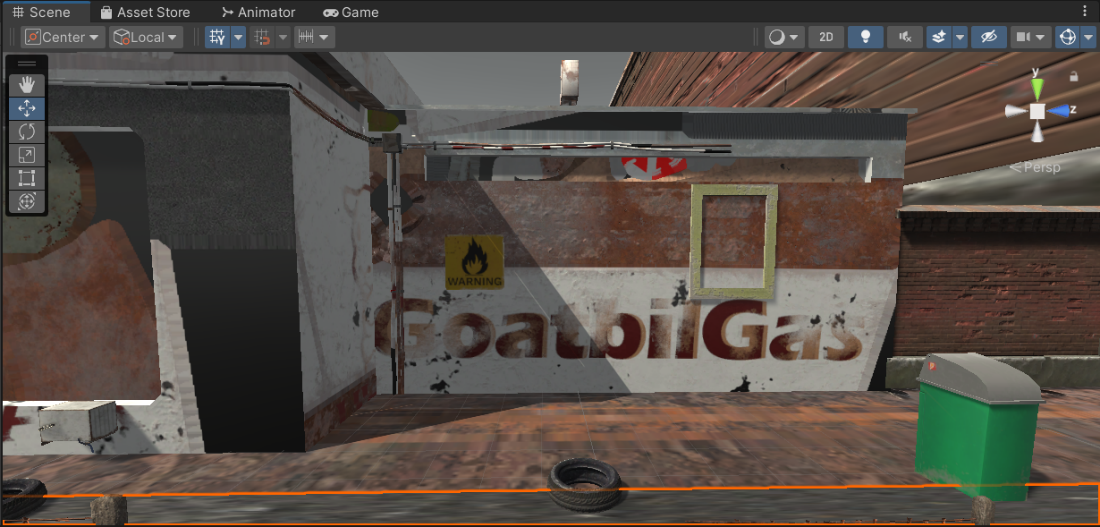


Figure 1:Prototype images

# Test Plan:

Through customer feedback, the preliminary prototype design is completed, and the progress time and details of the entire prototype are tested.

# Analysis:

Analyze unnecessary objects in the scene and delete them, add content that fits the theme, and control the time for prototype display

* The roadblocks in the scene can be appropriately deleted and their positions adjusted to make them look messy. The roadblocks in the scene can be appropriately deleted and their positions adjusted to make them look messy.
* The entire scene can be surrounded by old wall models, which can better express the sense of dilapidation that the war brought to the area.
* The color of the sky can be replaced with gray instead of blue.
* We don’t need to add a human model, we just need to bring in the first-person perspective.
* More analysis is also needed to obtain customer feedback.

# Results:

* Character models have been removed and only the first-person perspective is used to show the story and prototypes.
* Changed the amount and clutter of debris on the street and added broken fences.
* Different buildings have been added to make the entire prototype look less repetitive.
* Old walls were added around the entire prototype scene.
* More final corrections require customer feedback.......

# Feedback and comments

* The town looks too barren/abandoned, there should still be a way for the humans to live (get food, supplies, water, etc.)
* The colours of the buildings make it hard to distinguish between the houses and the shops.

# Prototyping test plan

Table 1:Prototyping test plan for our prototype 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test ID** | **Test Objective** | **Description of Prototype used and of Basic Test Method** | **Description of Results to be Recorded and how these results will be used** | **Estimated Test duration and planned start date** |
| 1 | Test NPCs textures: see if they display correctly | * Check resolution. * Check texture placement relative to the body. * Check for areas with no textures | * Results to be recorded: as indicated with method * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 2 | Test animations: to see if they work | * Ensure the software is set up correctly. * Start the animation. * Watch the animation | * Results to be recorded: as indicated with method * Implement it into our next prototype. | Duration: 1 week  Start date: November 6th, 2023 |
| 3 | Test animations: speed (too fast or slow for the user to understand them) | * Carefully watch the animation. * Evaluate the smoothness, the timing, and visual quality | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 4 | Test posters compatibility with unity after importing | * Check the size and resolution. * Check the placement. | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 5 | Test posters lighting and readability | * Compatibility with lighting * Ask people for any readability issue * Test under different lightings | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 6 | Feedback: can you see everything you try to look at? | * Ask user giving feedback * Ask them if they spotted the robots, the buildings, the NPC, and the end of the road | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 7 | Feedback: does the town look less abandoned than in prototype #1? | * Ask user giving feedback * Show the user prototype #1 first (if not already done) | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 8 | Feedback: do the signs make you worried about getting approached by a killer robot? | * Ask user giving feedback * Ask them how they understood them (why were they worried?) | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |
| 9 | Feedback: do you feel bad for the person/NPC? | * Ask user giving feedback * Why do they feel bad? * Does it make them more concerned about the killer robots? | * Implement it into our next prototype | Duration: 1 week  Start date: November 6th, 2023 |

# Conclusion:

To conclude, the first prototype has been created, analysed and tested. In addition, the feedback from the client and from potential users has been written down and analysed. Using this, we will proceed to the development of the second prototype with useful information that will contribute to its improvement.