Project Deliverable G: **Project Schedule and Cost**

GNG 1103 – Engineering Design

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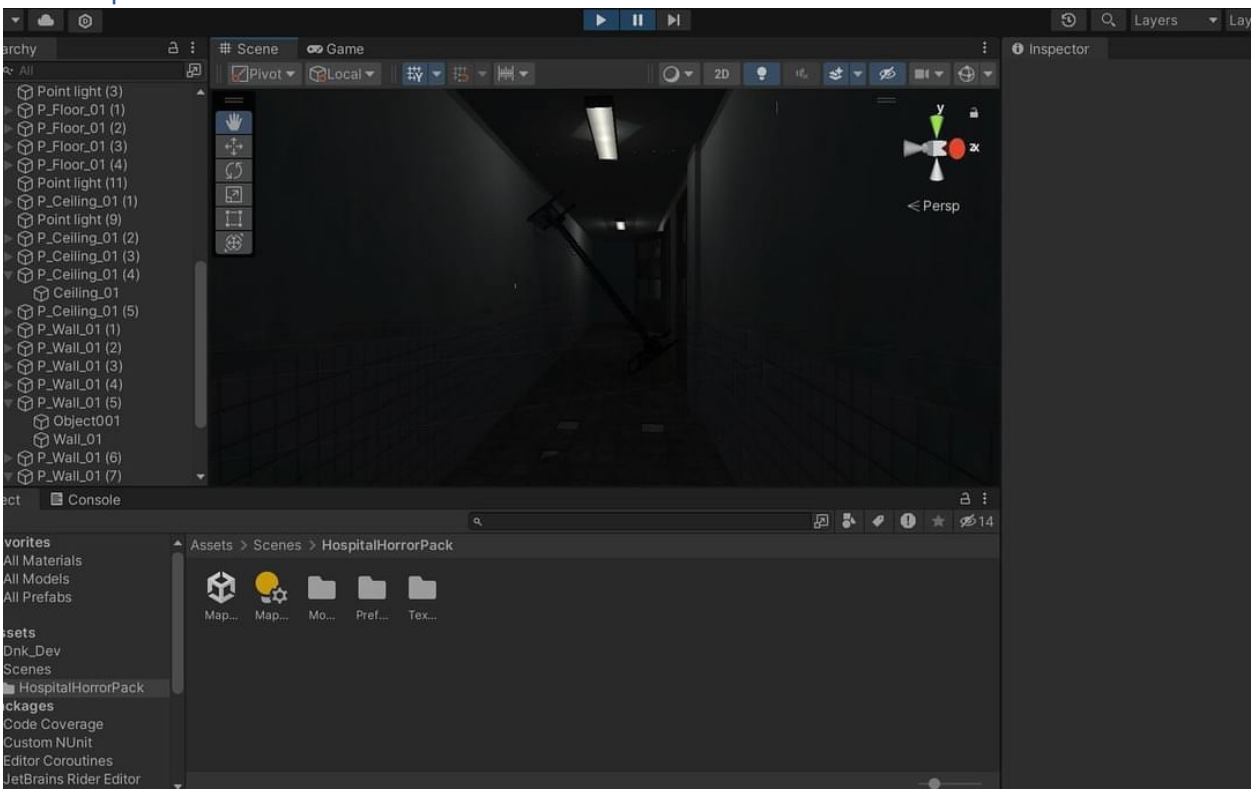
Introduction

This document outlines the plans set in place to make sure all three of the projects prototype and testing for them by their respective due date. This document also goes over the different components of this project, such as the materials, the cost and the risk to the completion of this project.

Clients Feedback

The clients liked the atmosphere of the environment and it's dark and menacing atmosphere that we presented to them. However, they wanted us to depict how does mankind adapt to the new environment that has been a result of the use of automated weapons. For example, how does people change their habit and lifestyle to stay safe and avoid the dangers from the hostile killer robots. Also, the clients wanted us to connect our designed environment with how humans changed their lifestyle and develop new tactics to stay alive and safe in this new environment surrounded by constant hostile robots.

Concept Sketch



Project Schedule

Number	Task	Dependencies	Owner	Duration	Due Date
1	Deliverable E : Project Plan and Cost Estimate	Deliverable D	Everyone	7 days	10/29/2023
2	Deliverable F : Porotype 1 and Customer Feedback	1	Everyone	7 days	11/5/2023

3	Deliverable G : Prototype II and Customer Feedback	2	Everyone	7 days	11/12/2023
4	Deliverable H : Prototype III and Customer Feedback	3	Everyone	14 days	11/26/2023
5	Deliverable I :Design Day Presentation material	4	Everyone	3 days	11/29/2023
6	Deliverable J : Project Presentation	5	Everyone	TBD	TBD
7	Deliverable K : User and Product Manual	6	Everyone	TBD	12/10/2023

Bill of Materials

Part #	Part Name	Description	Quantity	Unit Cost	Extended Cost
1	Personal Computer	Computers of use for software; provided by university or members	5	NA	NA
2	Unity	3D game engine to be used	5	NA	NA
3	HTC Vive	VR set, to be provided by university	1	NA	NA
4	VR headset	VR headset, in combination with Vive	1	NA	NA

5	Robot Pack(TBD)	Pack of 3D robots to be used for project	1	TBD	TBD
6	World-Building Pack(TBD)	World building for our simulation of torn down area	1	TBD	TBD
7	Sound Pack(TBD)	Sound pack to be able to add more authenticity to simulation	1	TBD	TBD
8	Gun Pack	Gun pack for user/robot	1	TBD	TBD
				Total	TBD

List of Equipment

Item Name	Description	Type	Prototype(?)	Source
Unity	Software needed for VR simulation creation	Equipment	1(for now)	Internet, MakerLab
VR Headset	Headset to be able to access and play simulation	Equipment	1 (for now)	MakerLab
Unity SteamVR Plugin	VR integration with Unity software	Library/Equipment	1 (for now)	Valve
Test Computers	Test computers that we can use to explore full range of VR video	Equipment	1 (for now)	Makerlab
Test Space	Space to be able to have functionality for the program	Space	1 (for now)	Makerlab
HTC Vive	The VR set to test the program	Equipment	1 (for now)	Makerlab

Project Risks

Risks	Importance	Impact	Odds of Encountering	Solution
Technology failure	2	Moderate	Moderate	During the working process make sure to test the systems and equipment repeatedly. Familiarising ourselves and perhaps finding problems early in the process that we can

				solve or figure out how to avoid it in the future.
Work being lost/not saved	1	High	Low	Regularly saving progress while we work on/develop the product. Can also backup the project onto a hard drive or cloud periodically
Project Complexity	2	Moderate	Moderate	Regularly check in with TA/PM to make sure our ideas and vision are achievable and realistic with the time frame we have. During client meetings check to see if the product is still headed in the right direction and has the shape of what they are asking for
Team Conflict	3	Low	Low	Being good communicators with everyone in the group voicing opinions and concerns when they come up. Solve disagreements maturely and calmly. If extra help is needed seek the TA or PM for help
Time management	2	Moderate	Moderate	Effectively use Wrike to plot out the tasks to be completed and use timelines and assign members sections of each deliverable to complete so work is evenly distributed

Prototype Testing Plan

Test number	What are we testing	Why	How are we testing it
1	The functionality and the reliability of the user's camera movement	To ensure the camera does not have any issue, and that it does what it's designed to do depending on what we decided (free user movement, scripted, etc)	Do several tries where the user will try different movement of the camera to see if it works properly
2	The atmosphere and emotions conveyed by the environment at its simplest no extra decorations, to	To make sure that we agree on a terrain layout that strongly conveys the desired effect and emotions (claustrophobic,	Each team member will explore the environment layout in the same way as the storyline will go.

	see if it reflects the desired effect	sketchy, terror, menacing, etc)	Then each member will give out a rating and note what was the atmosphere conveyed by the environment.
3	(IF WE INCLUDE IT IN THE DESIGN) The smooth running of anything or effects that's moving that isn't the user (ex; robots, explosion, civilian) or NPC. And its contribution to the storyline and the message being conveyed.	We need to figure out if those effects or NPC are keeping the user focused on the storyline and understand the message conveyed or if it distracts them from it.	Each team member and at least one person outside of the team (ideally the client if possible) will do at least 1 trial with the camera, environment and the effects/NPC. Then note down where was the attention of each team member drawn to, and how did they feel
	Testing the smooth running of the camera navigating the environment with the NPC and its effectiveness of creating the desired effect of living while hiding from a threat.		
4	Simulate the storyline in the basic environment with the camera and the NPC/effects if there's any. Then see how long it takes to do the storyline, also could verify the smooth running	To ensure that the virtual reality video stays within the time limit of 30sec to a minute. Also, to ensure that it works properly at this point in the testing phase. The goal is to give the user the sensation of living in	Do around 3 to 5 simulations with different people (client if possible) and count the time it takes as well as note any bug or issues that appears.

	of the video at this point.	constant fear hiding from a constant threat.	
5	(IF IT IS INCLUDED IN THE DESIGN) The sound effect and its effect on the atmosphere and the user's experience	To make sure that the sound effects are relevant in our goal to convey a message and to see if the sounds make the video more immersive to the user. Furthermore, test to see if the sounds effect plays at the right moment in the storyline to enhance the general atmosphere.	Do 3 to 5 trial run with different individual, team members and people from outside of the team. They will do the simulation with all the established component tested and verified from all the previous testing as well as the sounds to find out if the sounds preserve and enhances the effect of being in constant fear while hiding from danger. Everyone will note down their experience of the trial as well as emotions
	The overall experience of the entire design with all the components together after necessary modifications is made.	To see if the prototype fulfills all our needs and satisfies all criteria established	Do trials with at least 5 different people, ideally the client as well, if that's not possible, do it with someone that is outside of our class. Then each user will write down their overall experience, emotions and thought on the video We will ask what the goal of the video is to the people who are

			outside of our team and has no knowledge on our team project. With the team doing trials runs, we will have a check list containing the needs and the fundamental criteria and verify that the prototype fulfils all of them.