Project Deliverable F: Prototype I and Customer Feedback

Introduction:

This deliverable is mainly focused on the results of Prototype I and the user feedback received. Also, a test plan is created to accurately measure the next steps of development.

Client feedback:

- Focus on global concept 1 and try to make the experience as realistic as possible
- Take a look at real-life examples and implement those scenarios in the game
- Add informative signs throughout the streets and research more about risk education to implement into the VR experience

Ways that the feedback will reflect on the project:

1. Focus on global concept 1: We will create our VR based in a small community where an invasion is taking place. The user is a citizen of the community and is accompanied by a friend, a first responder, who is aware of these types of invasions and knows how to stay protected. Together, they roam around the streets and try to help those in direct need, sheltering them from AI weaponry.
2. Make the experience realistic: We will analyze real-life examples of scenarios related to the game's theme and incorporate them into the gameplay. This will make the experience more immersive and engaging for players.
3. Implement risk education: We will use risk education concepts applied in real-life scenarios as a basis for creating an informative experience. We will be using signs throughout the experience as well as an informed person to teach the user the dangers of autonomous weapons.

Prototype:

Why Prototype:

Prototyping is a crucial step in the design process as it allows us to test and validate our design choices before investing significant time and resources into development. By creating a prototype, we can quickly and efficiently identify any issues or areas of improvement, ultimately leading to a more effective and user-friendly final product.

What Prototype:

Our prototype will be a digital mockup of our game's user interface, which will include a basic representation of the game's environment, visuals, and overall user experience. The prototype will not be functional. Additionally, the prototype includes the custom signs that were chosen as our educational subsystem.

When Prototype:

The prototype will be developed during the early stages of the design process after the initial research and ideation phases have been completed. It will be used to validate the design direction and gather feedback

from potential users and team members. The prototype will be refined and iterated based on feedback, leading to a more potent and well-informed design.

Measurable Results:

The prototype's success will be measured by its ability to effectively communicate the design vision and gather useful feedback from users. Specific measurable results include:

1. Number of positive user feedback received
2. User feedback on the prototype's visuality and city settings
3. Feedback from team members on the prototype's visual design
4. The time and resources saved by identifying potential issues and areas of improvement early in the design process.

By creating a prototype, we can gain valuable insights into the user experience, identify potential issues and areas of improvement, and ultimately create a better final product.

Critical Systems:

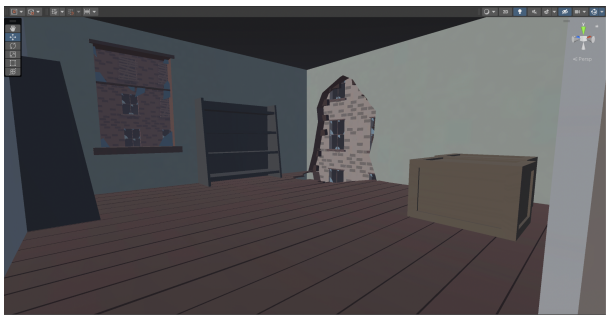
Safety critical system → critical systems include safety-critical software which is usually used in aircraft, cars, and medical devices. The safety-critical system can be used to ensure the safety of users in case the user experiences any medical issues while playing the game. The safety-critical software has a power shutdown feature that can be used when such a situation arises.

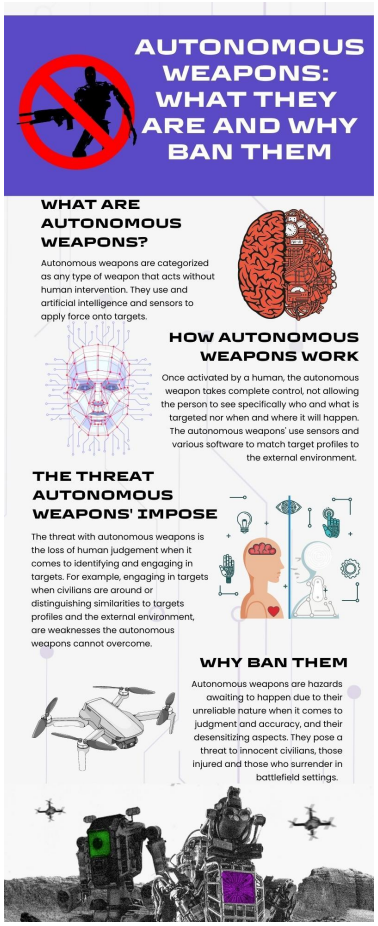
Mission-critical system:

1. Tracking and calibration systems: These systems are responsible for accurately tracking the player's movement and position within the game environment. Any errors in tracking can result in the player colliding with objects, falling over, or experiencing motion sickness.
2. Collision detection and physics engines: These systems are responsible for simulating the physics of the game world, including object collisions, gravity, and other physical interactions.

Prototyping Test Plan	Analysis	Results
Visual Aspect	- realistic and immersive environment of the destroyed city setting	The results are sufficient, which can be reflected in the pictures
Resolution	- high level of detail and clarity in the environment, which helped to enhance the immersive experience.	The results are sufficient, which can be reflected in the pictures
City Details and Educational Posters	- have a high level of detail in the destroyed city setting - Flawlessly incorporated educational posters	The results are sufficient, which can be reflected in the pictures

Pictures of Prototype:





User Feedback on the prototype:

1. "The level of detail in the destroyed city setting is impressive. I really appreciate the attention to detail in the broken walls and windows."
2. "I liked the city environment."
3. "The destroyed city setting is very realistic and immersive. It really makes me feel like I'm in the middle of a battlefield."
4. "The posters look incredible and are very well made, they are incorporated flawlessly into the game".

Overall, the feedback and comments on a VR prototype can be very diverse and subjective. It is essential to take into account constructive feedback and use it to improve the VR experience. By listening to potential clients and users and making necessary changes, the VR prototype can become more immersive, user-friendly, and enjoyable for all.

Analytical Model:
Mathematical equations or formulas could be used to predict the behavior of the virtual environment. For example, an analytical model could be used to predict the movement of objects within the virtual environment based on their mass, velocity, and other physical properties.
Numerical Model:
A numerical model for a VR project could involve using numerical algorithms to simulate the behavior of the virtual environment. For example, a numerical model could be used to simulate the physics of a virtual object, such as its collision detection and response.
Experimental Model:
An experimental model for a VR project could involve conducting experiments within the virtual environment to gather data and test hypotheses. For example, an experimental model could be used to test the effectiveness of different types of user interfaces or navigation systems within the VR environment, by having users complete tasks and collecting data on their performance and satisfaction.

Prototype					Test		
#	Objective	Fidelity	Feedback	stopping criteria	Objective	Result	Time
1	Evaluate VR design	Medium	Provided by user and team members	Sufficient visual aspects and good resolution	Test the visual aspect by moving through the city	The city is visually appealing and fits the story narrative	4 hours February 27 - March 4
2	Evaluate requirements	Medium	Provided by team members	Targeting most essential requirements based on priorities identified	Test the requirements like movement and interaction	Not done yet	4 hours March 5 - March 11
3	Evaluate story	Medium	Provided by user and team members	Developing a sufficient interaction mechanism	Create a sufficient story that is highly interactive for the user	Not done yet	5 hours March 12 - March 18
4	Final review	High	Provided by user and team members	Develop a functionally VR game this runs well	Make sure the game runs seamlessly and with no issues/glitch	Not done yet	4 hours March 20 - March 28

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Wrike Task Plan: