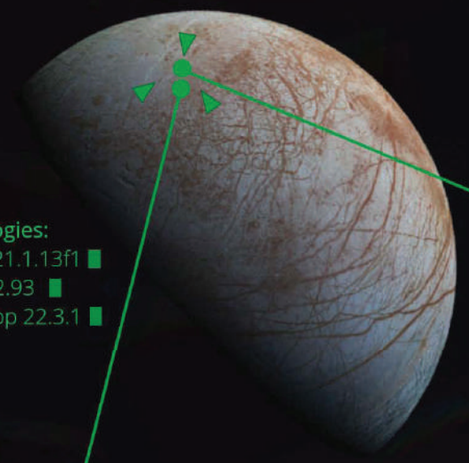
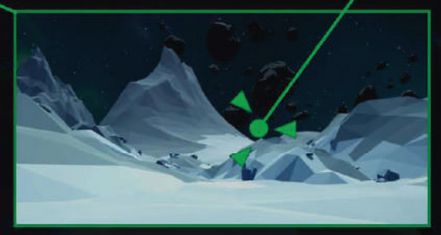
UNITY DESIGNED GAME

Game Design and Development (Team Work)

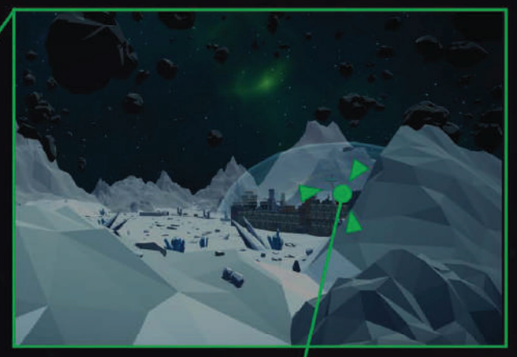
GAME DESIGN



Technologies:
Unity 2021.1.13f1
Blender 2.93
Photoshop 22.3.1



Main Scene:
After we are settled with the game genre and the background story, we decide to make the main scene a frozen and snow-covered landscape. At the center of this land, there is a city with a shield to protect whoever is underneath.
There are lots of great low-poly asset packs on the asset store which fit our concepts perfectly. The overall feeling should be freezingly cold and sci-fi, so we choose a cold tone such as white, blue, and grey throughout the scene.



Story:
In the near future, a giant meteorite hits the Earth and eliminates most of the humans. The Earth breaks apart and its fragments wander in the universe. Remaining lives in the last human city under the Nano shield. A few years later, the AI awakes, takes over the human government and begin to remould the body of humanity to machinery. You, who escaped from the remoulding manufactory, half robot half human, decides to resist AI tyranny.

Game Flow:
The player starts at the edge of the map and progresses towards the city. There are plenty of enemies along the path to stop the player.
There's a portal at the center of the city. It can teleport the player to another dimension where the final boss exists. The player would need to defeat the boss to finish the game.

Design Decisions:
We choose to build a low-poly game with simple materials at the very beginning of our planning, as it's impossible for us to create a photorealistic scene with the resources we have.

Name	Task	State
Linyan Zhu	Gameplay, Shaders, Boss Fight, Artificial Intelligence, User Interface, Audio	Finished
Chen Jiang	Story, Particles, Mission Components, Main Scene, Audio, Evaluation	Finished
Xinyue Zhang	Procedural Generation, Boss Scene, Evaluation, User Interface	Finished
Zhihui Chen	Main Scene, Evaluation, Audio, Artificial Intelligence	Finished

Particles:
The laser material under the Particles section also utilizes a custom fragment shader. The UV is moving throughout the time, combined with some other noise textures, to create a dissolving, glowing and energetic effect.

Glowing Hemisphere

Decals on the floor

Spark

vfx_Impact
This effect is only contains 3 different effects.
The background glowing hemisphere.
The sparks.
The decals on the floor.

Glowing Spheres

Spark

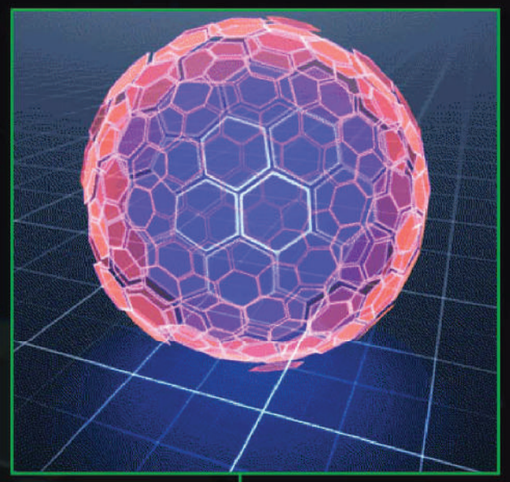
Shockwave

vfx_Charge:
vfx_Impact is the particles and decals at the end of the laser.
This effect contains 5 sub-particles.
The background: glowing spheres.
Two sparks: one narrower but longer, one fatter but shorter.
Two shockwaves: one red, one blue.
The frequencies and sizes of these two are different, to give randomness and an energetic feeling.

Evaluation techniques:
Observational Methods: Think aloud, Cooperative evaluation.
It's difficult to find participants face to face and invite them to play. Therefore, participants will receive our testing game and try to play the game via Zoom screen sharing. The video will be recorded, and participants gave feedback to the developer when they finished the game.

FINAL PRODUCT

CODE: github.com/chenjiang0819/FPSGame



TRAILER: youtube.com/watch?v=YQ7TLemPkf0