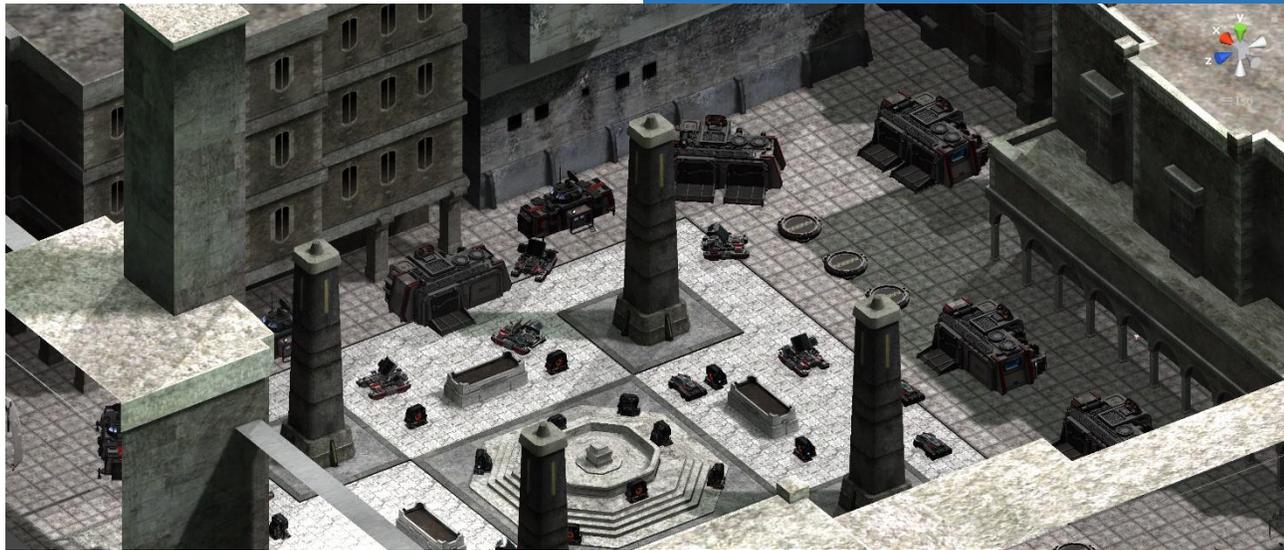


Fall 2019

Robot Game



Mahfoudh Batarfi
Bowie State University
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Goal and Objectives

- The objective of this project is to create a multiple user of Robot game. In this game I use a multiple user Networking technique. We used multi-user virtual environments (NetVE) which have common state, common space, common presence and common time. The users (players) share the same environment and interact with others within the environment by trying to kill each other.



Players share the multi-user virtual environments

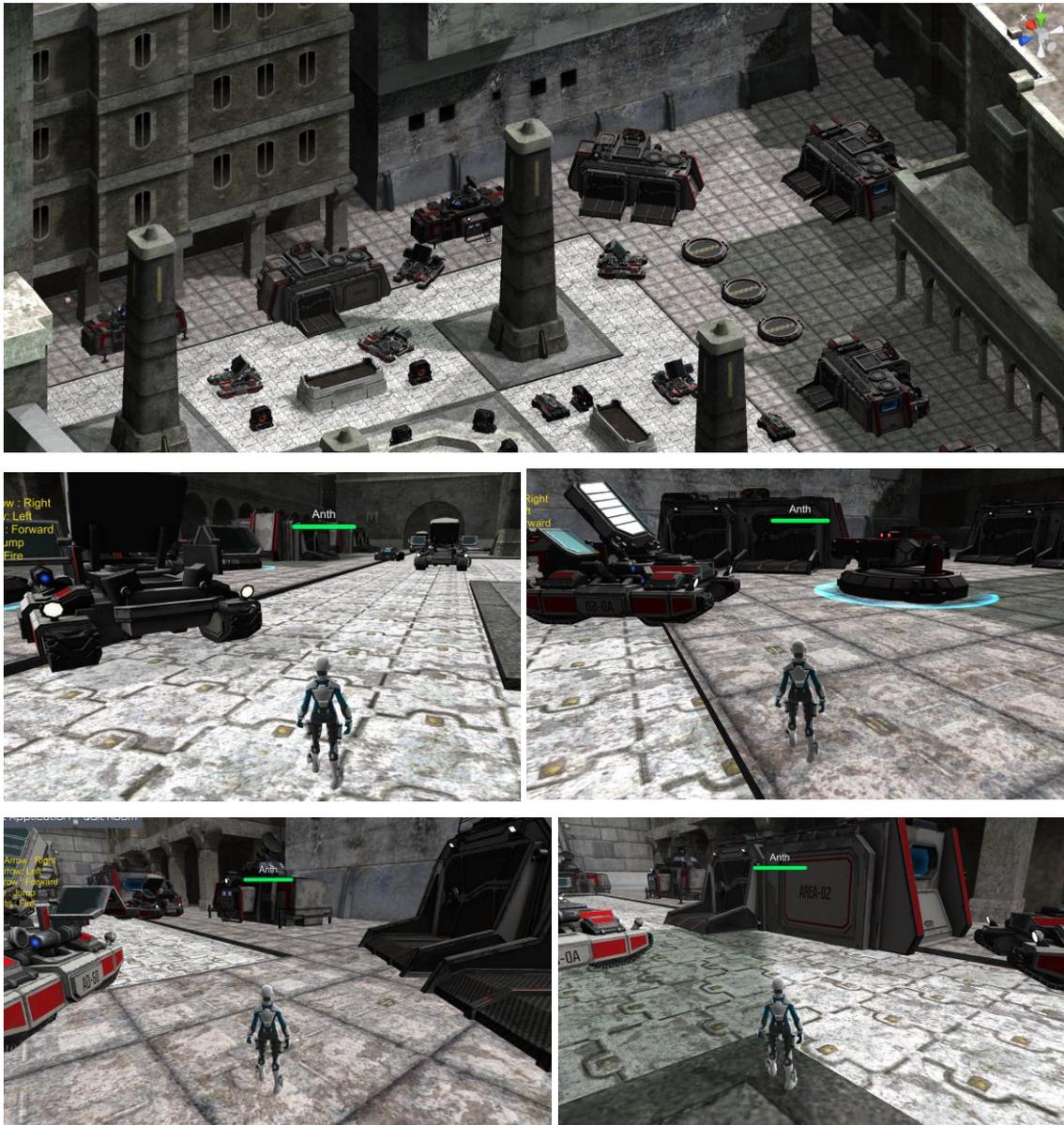


other side of Virtual Environment

Modeling

1. THE ENVIRONMENT :

The virtual environment is an isolated area that similar to small downtown containing a group of structures, some vehicles, some batteries and some weapons such as laser towers in addition to some complex electronic devices for this world.



Several Views of the virtual environment

MODELS :

- 2 vehicles
- 1 turret
- 3 structures
- Health Kit
- Fan



Fan



Structure 1



Structure 3



Structure 2



Turret



Vehicle 1



Vehicle 2

2. PLAYER

The player is a Third Person Controller. He is just a Robot. There is no guns, He just use a laser beam emits from his eyes as a weapon.



The laser beam emits from player's eyes



The player

Health

The player has a health that represented in the game environment by an indicator of health. When the laser beam hit the player, the health will decrease, and it increases if the player grabs the health kit.



Health indicator



Interface

The game has these components:

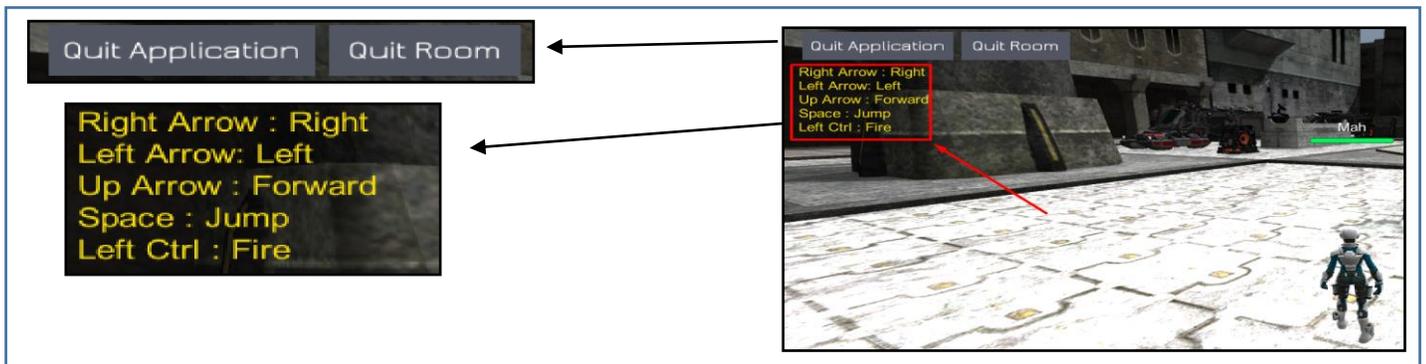
- Input component:
 - Player Name Field
 - Quit Room Button
 - Quit Application Button
- Output:
 - Indicator Health
 - Instructions.



Indicator Health



Player Name Field



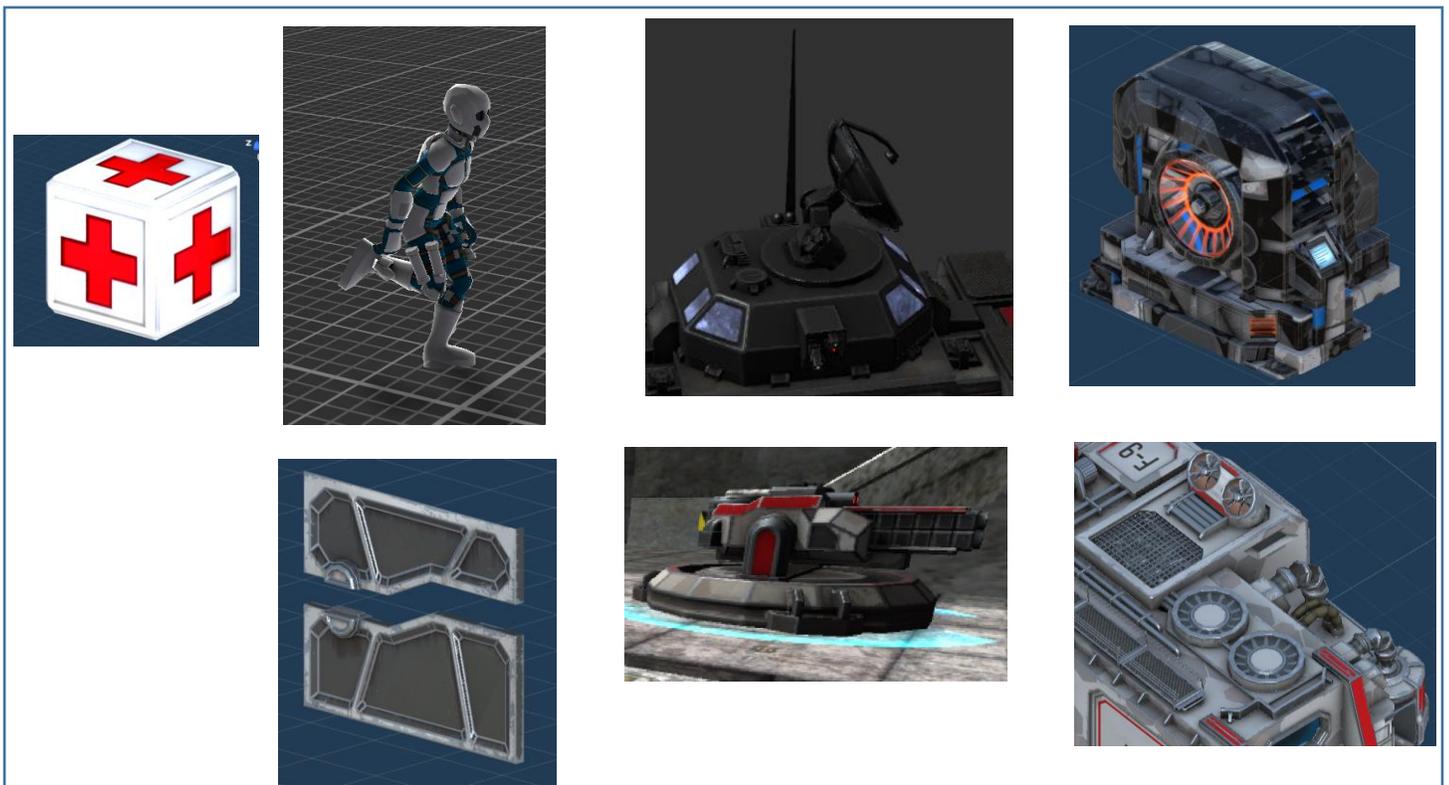
Quit Room and Application Button and Instructions

Animations

This game consumes different animations for different objects as follows :

- players
 - idle, Run , Jump , attack ..etc
- Doors :
 - Open, Close
- Fans : (*)
 - turn on/Off
- Health Kit: (*)
 - move around
- Laser_tower (*)
 - Up , down , turn left , turn right

* Play Automaticlly



different animations for different objects

Sound

- Laser sound
- Attack sound
- Open door sound
- Close door sound
- Ambient music sound
- Hit health kit sound
- Laser tower sound (up , down ,left , right)

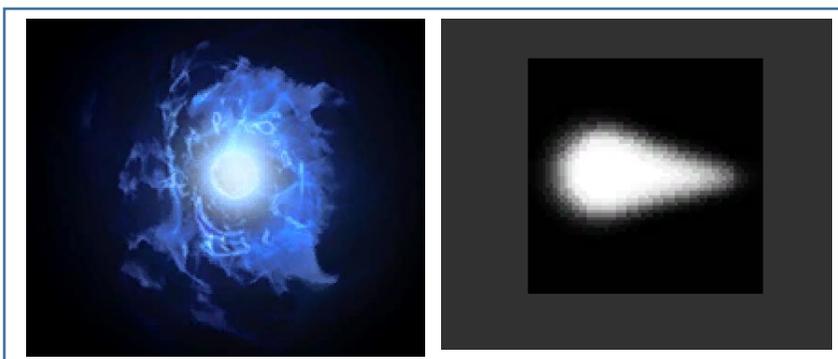
Interactivity

I used several **triggered** events in the environment, for example:

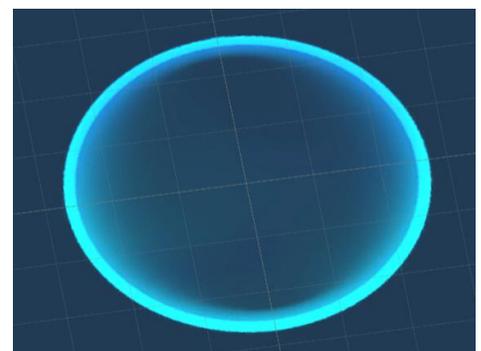
- Hitting the player to lose some health.
- Open/ close the door.
- Getting some health by chatch the health kit
- Laser tower goes up/down (autoplay)

Effects

In this game, I used a Muzzle Flash effect for laser beam, and Unit Selection for laser tower.



Muzzle Flash



Indicator Health