Zaxxon Game Software Systems Lab



Introduction

This game was made with the thinking of improving the game Zaxxon with high quality graphics and effects. And it is good enough to provide the best real time experience in gaming and it has many minute details that user can feel awesome while playing.

This game is made in unity 2019. There is some details written in this report to understand the game and it's feature and all about the Hero Player and the Enemies ahead.

Let us start with the Player

Player

Our *player* has some cool features like:

There are *four thrusters* in it helping it to move fast.

Next is the Bullet hole. It has basically two nozzles which make it advanced enough to shoot two bullets at a time and can destroy enemy with 2x better speed.

Obstacles

The obstacles we used are of three different kinds:

- 1.) **Walls:** These stationary objects act as physical barriers to the player's progress and serve the purpose of adding difficulty and creating a little bit of distraction for the player as they move forward through the level. The player gets destroyed when coming into contact with a wall-type object, but the wall remains intact.
- 2.) **Asteroids:** These objects move and rotate randomly through the scene and form the make-up of the second type of scene. They can move freely through space and collide with each other and with the player. They explode when they come into contact with either of the two, and the player explodes as well.
- 3.) **Mines:** Mines are stationary, floating and combustible objects that explode immediately as they come in contact with the player, causing the player spaceship to explode as well.

Enemies

The enemies are of different types:

1) Turrets: These are the ones which will track you and when you come near to them they will start attacking you with their super heavy bullets. So when you see one coming near take care to destroy them before they kill you and make you weak.

- 2) Enemy Planes(type 1): They are the ones which will come near you and will continuously follow you and they have the greed of killing you. They have same power as your spaceship. They too can shoot two bullets at a time and deal moderate damage.
- **3)** Enemy Planes(type 2): They are the ones which will come near you and will continuously follow you and they have the greed of killing you. They may behave same has type 1 enemy but their bullets are super intelligent. They shoot plasma which may be weak in all type of bullets in case of destruction but follows the player around aggressively in state of killing player anyway.
- **4) Vehicle:** These are the type of enemy which has the power of clearing the player vision and making it same feel as being blind. So it's better to kill them before they make your screen flash white.
- **5) Electric Shocker:** This one is the type of enemy which which give a shock to the player vehicle and kill it. In this case if you come anyone around you won't loose just health, you will loose one life too.
- 6) **Pullin:** This is basically the type of super power fan like some back hole or something like that which will just attract you towards it and will surely kill the player by either means.
- **7) Boss:** This is the one with some intelligence. It will first come to test you if you are actively playing. If not then it's difficult to dodge him. Because it will just come to kill the player. If you will continuously try to attack him then he will step back and wait for you to become weak while as you fight the other enemies and in between continuously attack you keeping itself in safe place so that you will find it difficult to attack it. And at the end when all enemies are down then he will come forward to have a face to face fight with the player.

Levels

Level1: This is the level to just give a glance to the player which is going to come next. So there will be every type of enemies which will be going to come. There are mines as additional object. There are turrets, there are enemy planes and many more in just a small amount, so that the player can get a little taste of the gameplay.

Level2: This level makes the player face a series of enemy planes which can follow the player spaceship and attack it. These enemies start out by approaching the player in a straightforward manner but then later approach more randomly and may seem to appear out of nowhere, creating an element of surprise and adding to the difficulty. The layout of this level is made up of a space-like void as its background and freely moving Asteroids.

Level3: In this level there will be some attractive feature which makes it attractive to see. It actually tries to make it difficult to cross the level by some difficult barriers in between and then there will be some enemies which will make it difficult to cross those barriers. There are turrets and then the venom box and at the end the laser technology that will try to stop the player from going forward and win.

Level4: This level we have all the things bind up. There will be the structures that will create the annoying sound and you have to destroy it to keep away from that sound effect. Then there will be ready to go turret that will stop you from going forward then there will come some barrier which if you cross will lead you to the main villain of the level the Pullin fan which will attract you towards it. And also there will be one helping hand of it the electric structure that will just kill the player from shock. And if you cross all those then you will see the small tiny vehicles which will cook the silenced bomb for you which will stun the player and blanks the screen and if you escape this. You win the level.

Level5: This is the final level and features all different types of enemy planes. with the boss plane making its appearance here. This level has the same layout as level2, but the gameplay experience is different because different types of enemies are present at once and the boss displays intelligence as it freely moves back and forth in the level.

PARTICLE EFFECTS

- **1. Bullet:** There are many bullet types, each bullet type has its own range and *explodes* after it travels a certain amount of distance.
- **2. Player and Enemy:** The player and enemy objects and spaceships have their own particle effects when they collide with other objects, i.e. a different effect each for

colliding with a bullet, a wall and an enemy plane. The player spaceship also creates sparks when it comes into contact with the boundary of the current level.

- **3. Asteroid:** When two asteroids come into contact with each other, they explode and create large explosion in space, visible even from far away.
- **4. Plane Thrusters:** The player spaceship and the boss spaceship have thrusters implemented through particles and the boss spaceship can even turn its thrusters on-and-off during run time, depending on the situation and its direction of travel.

Animation:

We have used the animation in many levels which will be giving the real feel of enemies showing up and opening when the player come closer to it.





