

Software Systems Lab

Course: COP 701

Assignment-2

Submitted By:

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Objective:

To implement the Zaxxon game using Unity3D/Unreal engine having following features:-

1. Make it a standalone application.
2. Incorporate very nice visual elements.
3. Make the graphics very smooth.
4. Gradually make a level harder.
5. Have at least five levels. Be creative and improvise. Add at least two new features.

Introduction:

Zaxxon is a 1982 [isometric shooter arcade game](#), developed and released by [Sega](#), in which the player pilots a ship through heavily defended space fortresses. The object of the game is to hit as many targets as possible without being shot down or running out of fuel—which can be replenished, paradoxically, by blowing up fuel drums.

We have been given task to develop a Zaxxon like 3D game using Unity tool. The Unity Editor features multiple tools that enable rapid editing and iteration in our development cycles, including Play mode for quick previews of our work in real-time. It has an All-in-one editor available on Windows, Mac, and Linux, it includes a range of [artist-friendly tools](#) for designing immersive experiences and game worlds, as well as a strong suite of developer tools for implementing game logic and high-performance gameplay.

Development methodology:

1. To learn Unity tool and its different interfaces, Physics Engine, Prefabs, Models, Scenes, Colliders, Canvase, Animations etc.

2. Developed game in following stages:

- (i) **Stage 0: Welcome screen:** It is the start screen of our game. Background music will be played during entire game. Player select “Enter” button to go ahead to play game.
- (ii) **Stage 1: Space Maneuver:** Here player learn how to drive plane in space. Player can move plane to left, right, up and down direction. During the move, player has to escape from moving enemy planes and different types of asteroids. Player can have maximum three lives in game. After that game will restart.
- (iii) **Stage 2: Space Dodge level:** In this level player learn dodge with higher difficulty level i.e. more enemy planes, asteroids. Also here you can see the Scoring, fuel indicator, number of lives indicator (in slider), and height indicator.



- (iv) **Stage 3: Space Hunter:** Here player has to face asteroid showers from enemy side. Player can fire to destroy enemy planes and asteroids.
- (v) **Stage4: Ground Attack:** Here we can see a different layout(terror camp) other than space layout. Player can drive plane by observing enemy area and firing to enemy targets. Enemy area can have walls , tree, oil tank, rocks, water tank, buildings, tanks etc.
- (vi) **Stage5: Battlefield Intgration:** Here player has to encounter with enemy tanks as well as fighter plane. Player can fire or escape from them.
- (vii) **Final Stage: Credits and Thanks screen:** This is the final screen showing information about game developers and pay thanks for playing game.

Salient features:

- Music: Background and shooting
- Particle system using VFX: For explosion and target destruction
- Enemy shooting with movement. Enemy tank can move in any direction.
- Random rotation of asteroids
- Player bank(tilting) during movement
- Animation

3. Compile and Build: WebGL Platform

4. Submit the game