

**Assignment 2**  
**Game Development using Unity3D**  
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**Basic Setup :**

1. Unity 3D game engine is used for the game development . Various assets downloaded from the internet (Unity Asset Store) are also used for designing the layout of the game .
2. WebGL is used to export the game .
3. C# which is an event driven programming language is used for making scripts for controlling various events and Game Objects.

**Game Design :**

1. The game has 5 levels with 3 different layouts .
2. The player is a shooter plane with controls up,down,right,left.
3. A health bar , fuel bar , height bar and score functionality are added to reflect the progress of the player in the game.
4. We added an extra functionality for maintaining the player score and the high score.
5. Depending on the way the level is completed (successful or failed ) the GameOver/ LevelUp screen comes. The screen also shows the current score of the level and the high score that particular level . These Screens were designed using basic designing skills on stock animations . Sounds were added from the web . The elements used for designing were designed keeping in mind the arcade classic feeling of the game.
6. Various enemies are encountered throughout the game :
  - a) Stationary containers/crates : These don't pose any threat and just for the user to take points by hitting them .
  - b) Tracer Missiles : They move with a constant velocity towards the player however follows the left,right,up,down direction of the player till it either crashes or passes across the player.
  - c) Fighter Planes : They are similar to Tracer Missiles with added functionality that they are capable of shooting bullets.
  - d) Tanks : These are stationary enemies and shoot bullets .

e) Walls : They are stationary enemies and the player must go about them in order to not collide and explode.

f) Asteroids

g) Bosses:

These are designed to be the toughest enemy of the level

They appear at the end of the level and the plane stops for a

face off . These are designed to be tough . These include fighter

planes , Robot Sphere. The fighter planes have tracer and added

difficulty associated with them . Robot Sphere open up when the

player comes in front of it . It rolls towards the player in order to collide

with it and kill it . However it takes some time to recharge to roll again

hence there is a window for shooting the sphere and killing it.

Various new features were added including the ability of stopping the plane and unique and many variety of enemies.

**The game was then exported to WebGL .**