

CS 230 - Project Asteroids

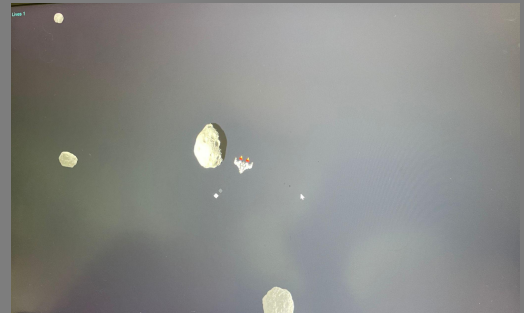
S Hanisha Sree
Varshini Sampath



Introduction

The major idea for the project is from the Asteroid game. Asteroids is a space-themed multi directional shooter arcade game designed by Lyle Rains and Ed Logg released in November 1979 by Atari, Inc. The player controls a single spaceship in an asteroid field which is periodically traversed by flying saucers. The object of the game is to shoot and destroy the asteroids and saucers, while not colliding with either, or being hit by the saucers' counter-fire. The game becomes harder as the number of asteroids increases.

The player controls a triangular ship that can rotate left and right, fire shots straight forward, and thrust forward.



Overview

- The player can move in all four directions.
- We have asteroids moving around the screen.
- When the player shoots the asteroid it vanishes.
- The goal of the player is to shoot them and score points.
- Smaller asteroids give more points and vice versa.



Implementation

Player

- Spaceship

Defining the properties

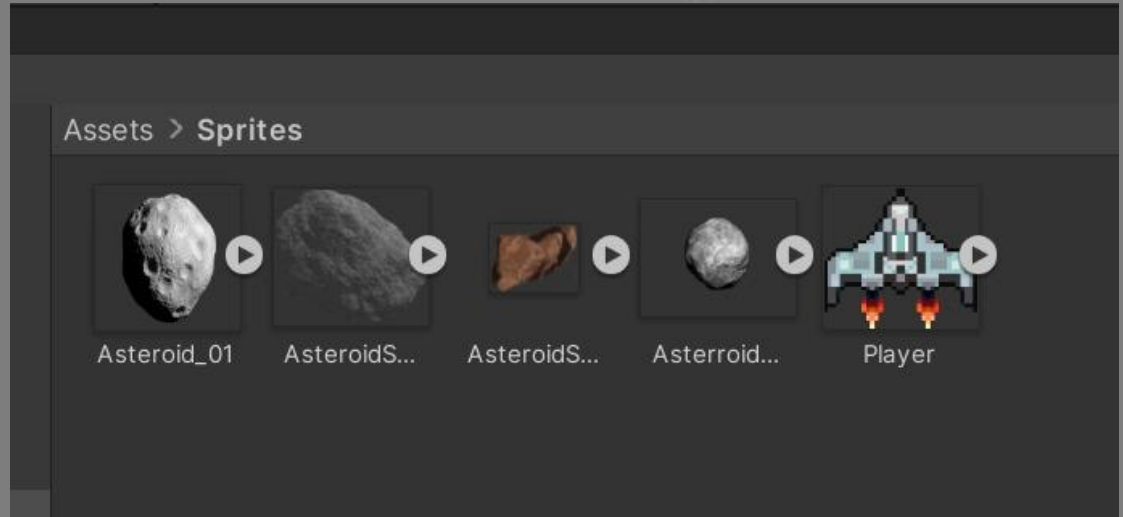
- Mass position
- thrust speed
- turn speed
- transformation

Bullets from spaceship

Rigid Body,

Rigid body collision,

Rendering



Implementation

Asteroid

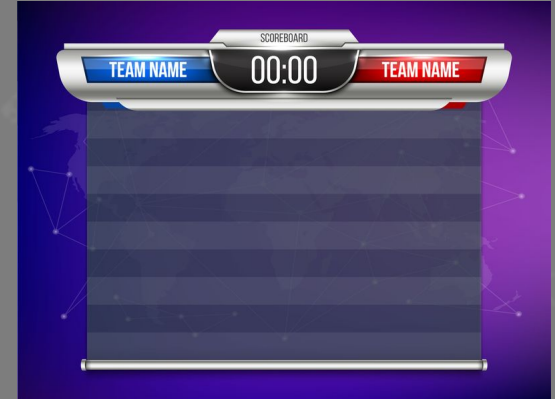
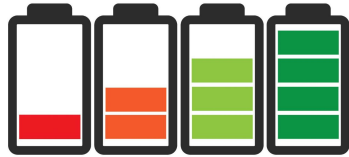
- Creation of asteroid
- Respawnning
- Destroying
- Respawn Changes

Boundary

- Spaceship
- Asteroid

FURTHER IMPROVEMENT

- Give user choices (playing mode, color, shape)
- Improve and increase levels
- Create a better UI for the game
- Store previous scores and maintain a leaderboard



THANK YOU

REFERENCES :

1. Sprites from Google
2. Unity - 2020.3.3
3. <https://docs.unity3d.com/ScriptReference/Rigidbody2D.html>
4. <https://www.youtube.com/watch?v=cleWhztKyAq>