# Space Runner

# Game Overview

- Space Runner is a 2D top-down arcade game developed using Unity. The player controls a spaceship that can move only left and right while objects fall from the top of the screen.

- The main objective of the game is to collect falling point-givers to earn points while avoiding obstacles that can damage the player.

# GAME SCENARIO

The player is a spaceship flying through space.

Energy crystals fall from above and must be collected to score points. Asteroids and enemy debris fall toward the player and must be avoided.

The background scrolls continuously to create the feeling of moving through space.

# PLAYER CONTROLS

- The player can move **left and right only**
- Controls:
    - Arrow keys or A / D keys
- Player movement is limited to the screen boundaries
- The player has:
    - Health
    - Score

# POINT-GIVERS

- Point-givers are **Energy Crystals**
- They spawn from the top of the screen
- Only **one spawns at a time**
- A total of **10 point-givers** spawn in Level 1
- Each crystal collected gives **5 points**
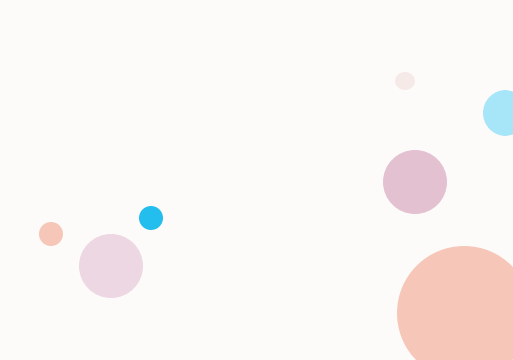- Crystals disappear when collected or when leaving the screen

# OBSTACLES

- Obstacles include:
- Asteroids
- Space debris
- Obstacles fall from the top of the screen
- They move in a **non-linear way** (zig-zag or curved movement)
- Obstacles have:
- Different speeds
- Different damage values

# TOOLS & TECHNOLOGIES USED

- Unity Game Engine (2D)
- C# programming language
- Unity Physics (Colliders & Triggers)
- Unity UI system
- Sprite assets for player, obstacles, and background

# CHALLENGES FACED

- Implementing smooth left and right player movement
- Controlling object spawning timing
- Creating non-linear obstacle movement
- Detecting collisions correctly
- Making the background scroll smoothly
- Balancing difficulty between Level 1 and Level 2

# FUTURE IMPROVEMENTS

- Add more levels
- Add power-ups and shields
- Include sound effects and background music
- Add animations and visual effects
- Add a high-score system

# THANK YOU