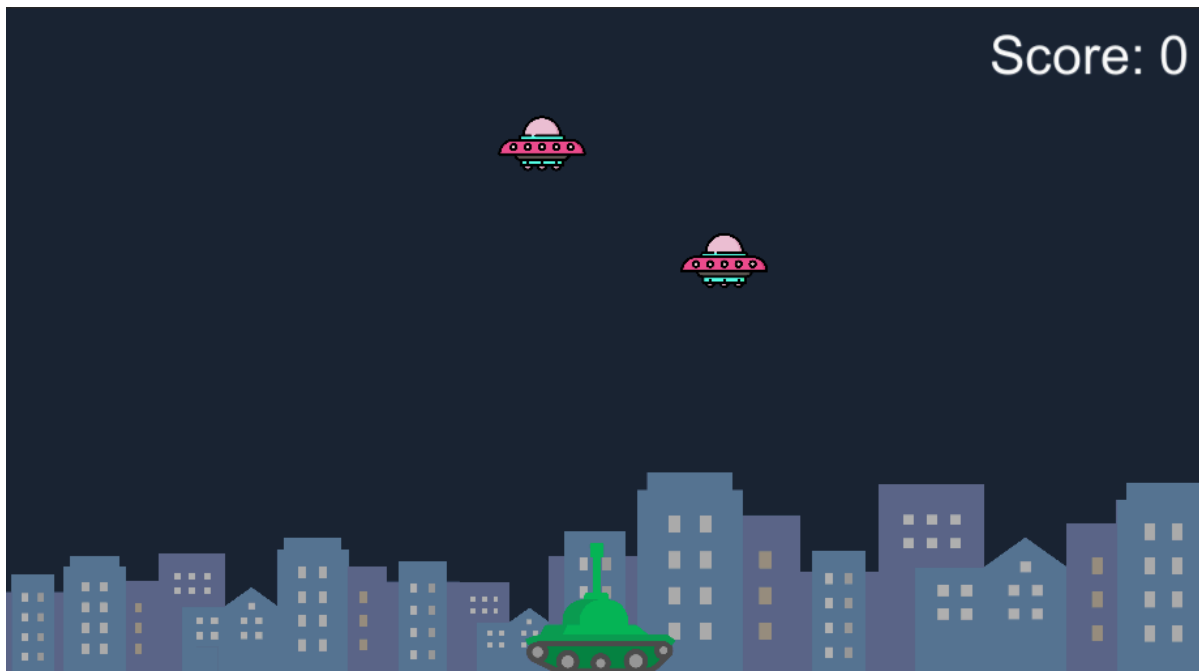


Exercise: Citydefender - Vectors

Preparation

Download the Project from the resources and open it in Unity



1. Playermovement

Open the script Tank.cs and implement the functionality so that the player can move along the X-Axis.

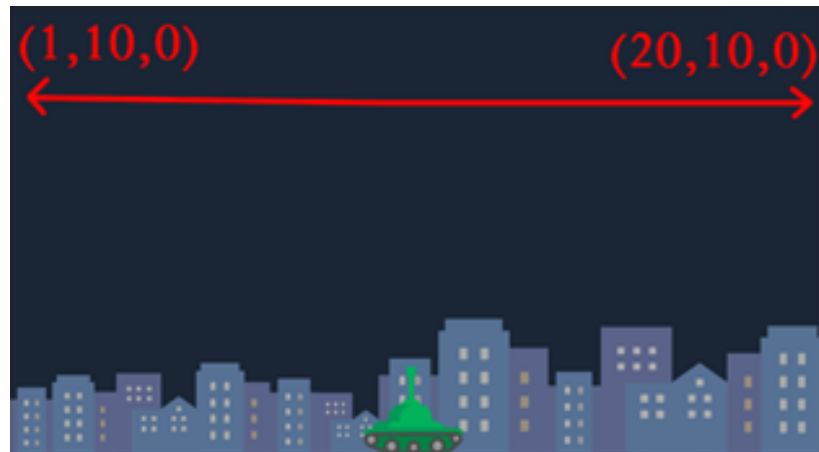
The Movement-speed should be frame-independant (use Time.deltaTime) and you should be able to manipulate it in the inspector.

2. Spawn Enemies

Open the script SpawnerScript.cs

The script should spawn an enemy every few seconds.

The newly spawned enemy should also be placed randomly at the top of the screen:



3. Basic Enemy movement

Open the Script BasicEnemy.cs.

The Enemies should move downwards and you should be able to set the speed in the inspector

4. Firing Playerbullets

- a) Open the Script Tank.cs

When the left mousebutton is pressed you should spawn a Bullet. You can use the variable `_bulletPrefab` for that.

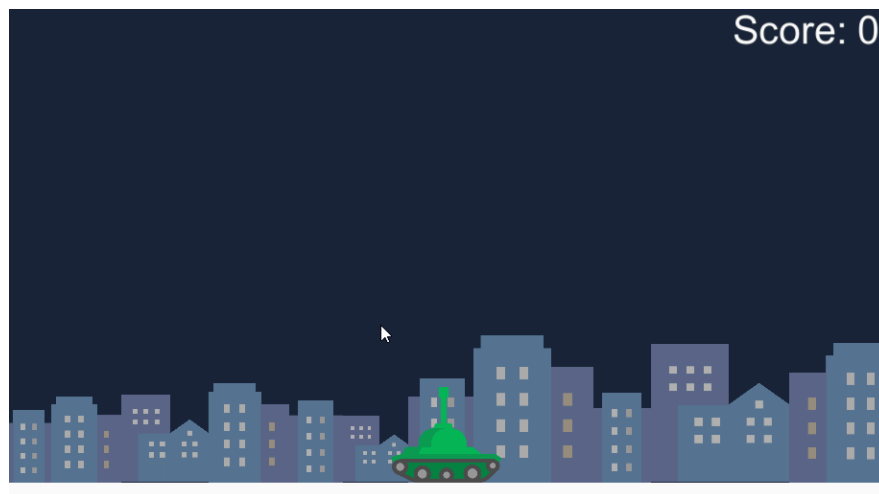
As the spawn-position you can use the variable `_bulletSpawnPos`.

Hint: `Input.GetMouseButtonDown(0)` checks if the left mousebutton was pressed.

- b) Open the script PlayerBullet.cs

The bullet should move upwards at a constant pace and the speed should be changeable in the inspector.

5. Guiding Missile



- a) Open the Script Tank.cs
When the right mouse-button is pressed you should spawn a Guided Missile. You can use the variable `_guidingMissilePrefab` for that.
- b) Open GuidingMissile.cs
The missile should move towards the mouse. You can use the Function `GetMousePos()` for that.

Hint: Don't forget to normalize the direction of the missile!
We will not deal with rotating the missile for now.

6. Optional: Implement additional enemies

I.e. a carrier that spawns additional enemies when destroyed
Or a enemy that shoots at the player