AR/VR

Assignment 1

Overview

Please design a game with following features

1.   Controllable GameObject (20pts)
2.   Ground with material (10pts)
3.   Interactive GameObject (20pts)
4.   Camera following the player (10pts)
5.   UI (15pts)
6.   Bonus (extra 10pts at most)

And

7.   Build your game (10pts)
8.   Write a report (10pts)
9.   Hand in your code and report (5pts)

Details

Controllable GameObject (20pts)

Place a GameObject that the player can control and move.

- The object should have a Rigidbody component and apply physics. (5pts)

- Use Input.GetAxis("Vertical") and Input.GetAxis("Horizontal") to control the object. (15pts)

The appearance of the object is not restrict, you can use cube, sphere or model.

Ground with material (10pts)

Use plane, cube, terrain or anything else to shape the ground.

- Player can walk on the ground. (5pts)

- Apply materials to the ground, make some color change or attach texture. (5pts)

Interactive GameObject (20pts)

Place some GameObjects that player can trigger something, such as add score.

- Write the code in OnTriggerEnter() or OnCollisionEnter(). (15pts)

- Duplicated objects should be stored in Prefab. (5pts)
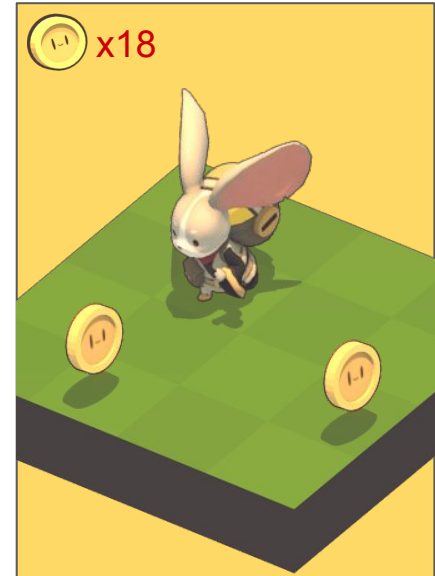
Camera following the player (10pts)

Set the camera to be relative to the player.

- Write a script to translate camera position (5pts)

- Do not just set the camera as a child of the player in Hierarchy. (5pts)
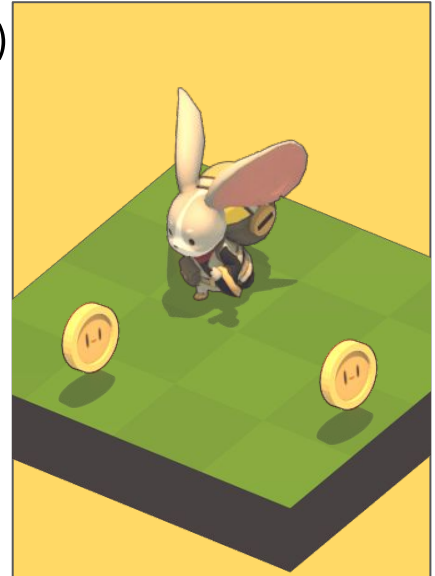
UI (15pts)

- Display some information dynamically in UI, such as scores or position... (10pts)

- The size of the text object should be relative to the screen size. (5pts)

Bonus (10pts at most)

Any other features are welcome, be creative!

The maximum bonus is 10 points.

For example:

- A mechanism to switch scenes, e.g. when the player dies, restart the level.
- Instantiate coins at random position when the game start.
- Apply audio effect when picking up a coin.

Build (10pts)

- Windows
    - Export the game as an .exe file
    - File -> Build Settings -> PC, Mac & Standalone -> Build

- Mac
    - Export the game as a web version
    - File -> Build Settings -> WebGL -> Build

Report (10pts)

- Explain how to play your game. (5pts)

- Briefly describe the features in your project. (5pts)

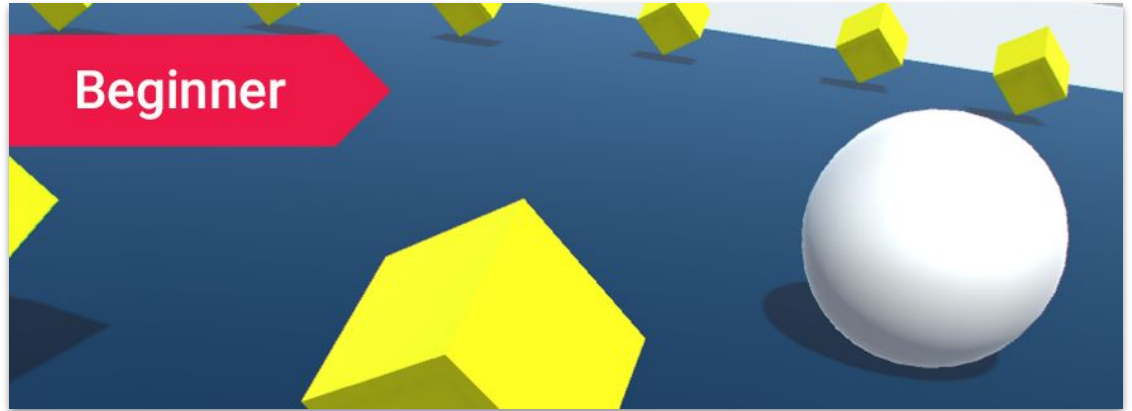If you have any other bonus features, specify them in your report.

Hand in files (5pts)

Compress your report and code as <student ID>.zip. (5pts)

Upload to New E3 before deadline 4/8 23:55:00.

Official Tutorial

If you have no idea how to get started, you can follow this official tutorial step by step to finish this assignment.

Link : [Roll-a-ball](#)

Last thing...

This is individual homework, not group.

You can import other asset, but please <mark>write the code on your own</mark>.

If you have any question, feel free to ask TAs.

Good Luck and Have Fun！