



CubeSurfer

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<https://github.com/smithngslv/mogusus>

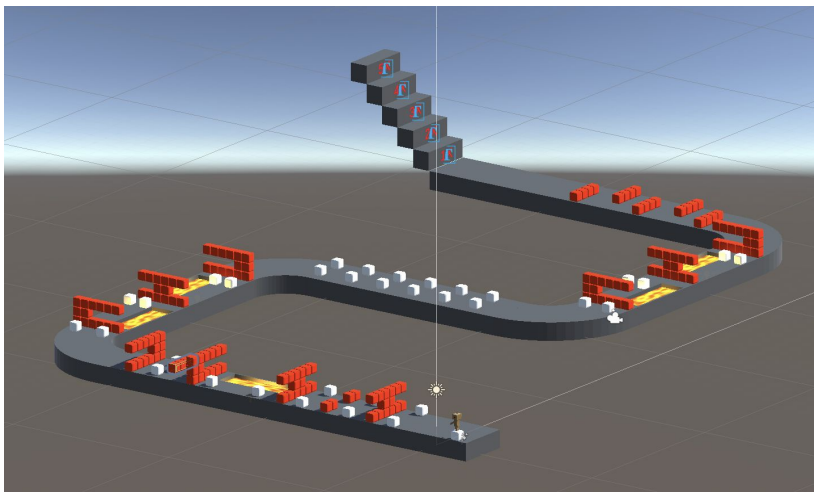


Gameplay

https://drive.google.com/file/d/11uf0nKmA9_NpkhCpaAtlziMubGAircAa/view?usp=sharing



Architecture

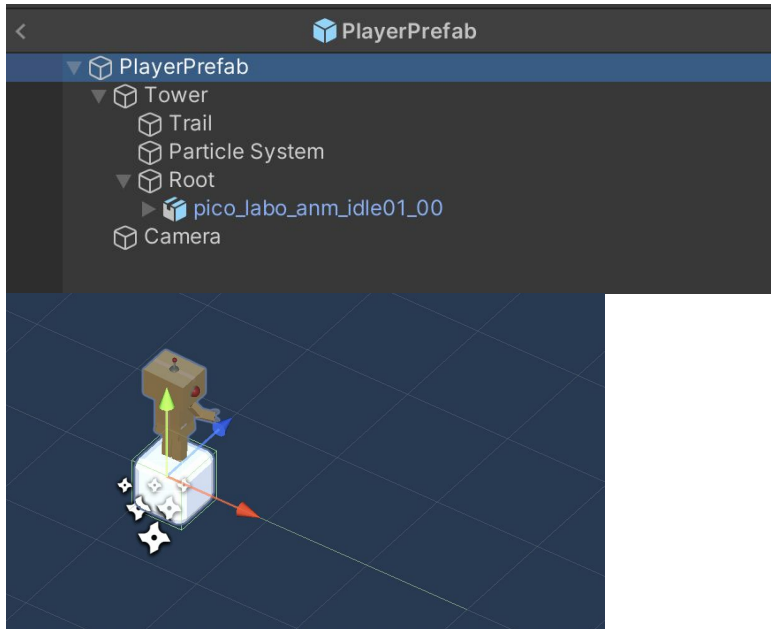


Each level is distinct scene.

Level are looped. There are 4 levels, first one is training. Each level has a param, that determines which level is next.

So, $0 \rightarrow 1, 1 \rightarrow 2, 2 \rightarrow 3, 3 \rightarrow 1, 1 \rightarrow 2 \dots$

Architecture

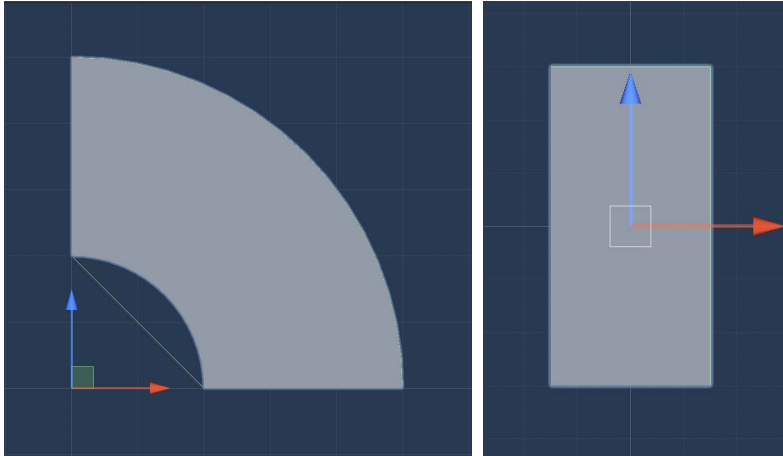


Inside user there is a tower with user-pieces that can move only along the y-axis. And the tower can move only x-axis.

On the front of the player there is a collider, that determines surface the player is moving on.



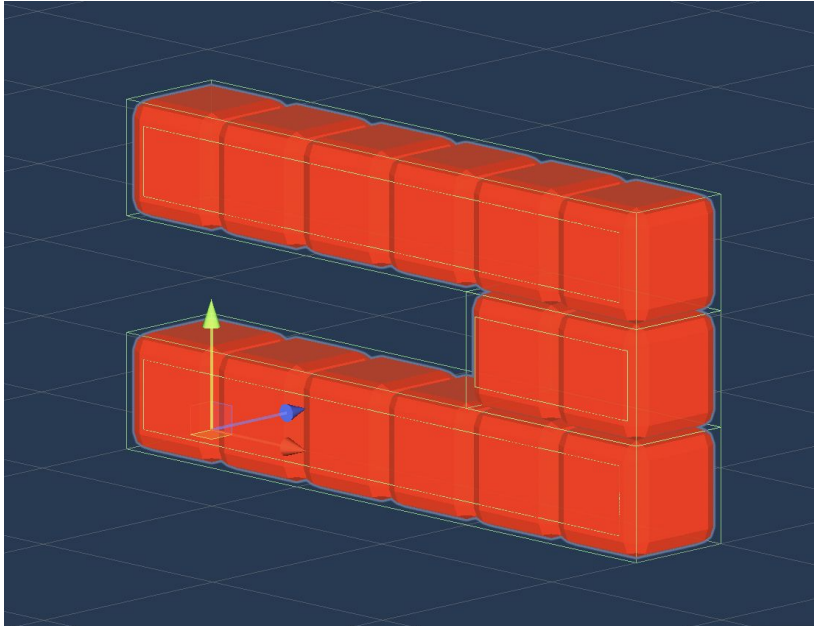
Architecture



There are two types of surface. First is straight and the second is turn.

When user is moving on turn surface, rotating via **`transform.RotateAround()`** is performed.

Architecture

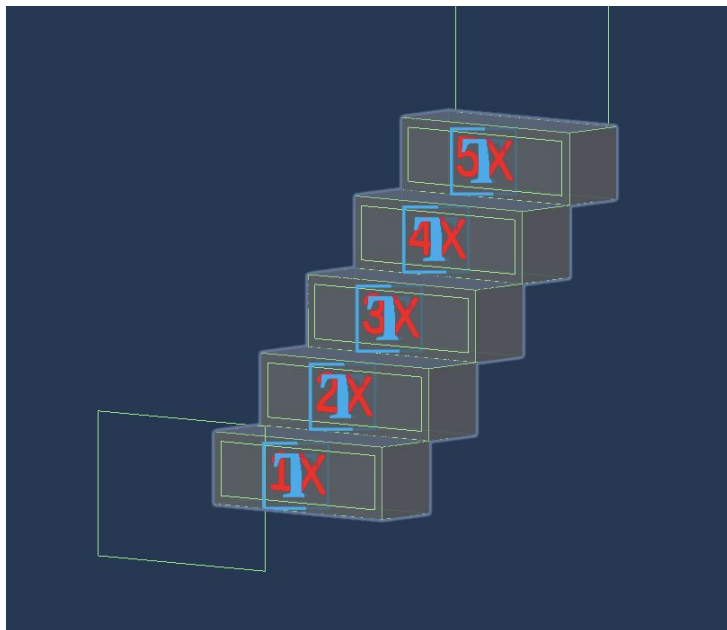


Obstacles has two types of colliders. First one is physical and the second is logical.

Physics collider is need to properly process falling.

Logical collider is a trigger, that detach player piece from player tower.

Architecture



Finish is a just a obstacle. All logic with calculation of multiplier happens when player go through first trigger.

```
Event function Ivan Izmaylov
private void OnTriggerEnter(Collider other)
{
    if (other.transform.TryGetComponent(out PlayerPiece playerPiece))
    {
        Multiplier = Mathf.Min(a: Mathf.CeilToInt(f: playerPiece.GetComponentInParent<Player>().Score / 2.0f), b: 5);
    }
}
```




Research

- 1) Create models in blender.
- 2) DOTween.
- 3) Touch controls.
- 4) Saving progress.

Course

- 1) Collisions and Physics.
- 2) Creating objects from prefabs via scripts.



Difficultes

- 1) It's hard to build communication between models and UI without scripts with difficult logic.
- 2) Road rotating.
- 3) Build 4 levels. It's better to write a generator.



Thank you

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