Jelly Cube - Implementation Guide

Jelly Cube is a puzzle game starter kit compatible with 2019.

- ‘Roll-a-Box’ Puzzle with several levels of challenges and great visuals;
- All source code included;
- Easy to play. Easier to Implement new levels;
- Beautiful Rubber/Jelly Effect Script to use in another projects.

Produced by www.tropicblocks.com @ 2020

How it works

Let´s suppose you have 3 checkpoints into a scene: 1 green, 1 red, 1 blue.
So it´s necessary to have at least 3 cubes, with the same colors on the scene.
When the user pull cubes over the respective checkpoints colors, the system checks if the tag name of the cube object is compatible with the checkpoint “CubeTag” property. Once all cubes are over the respective checkpoints, the CubeManager scripts send a message to the GameManager that the level is completed.

Requirements of the Core Gameplay

(Tips to extract the basic gameplay features into another game)

The basic pieces required to make the gameplay works are the CubeManager in an empty object, the CubeController in a cube with collider, a CheckPoint in a cube with collider(trigger) object, and an object with an InputManager to that pass a Vector3 direction to the CubeManager. You can check the basic functionality in the scene “SuperBasicImplementation”.
The GameManager and the simple UI that appears in the other demo levels are detached from this basic gameplay. This allows the developer to extract the core gameplay and implement it inside another game with very low effort.
It’s required to place all objects of the level inside a Root transform object. This sets the level world to this local transform, and allows to move the entire level to a different

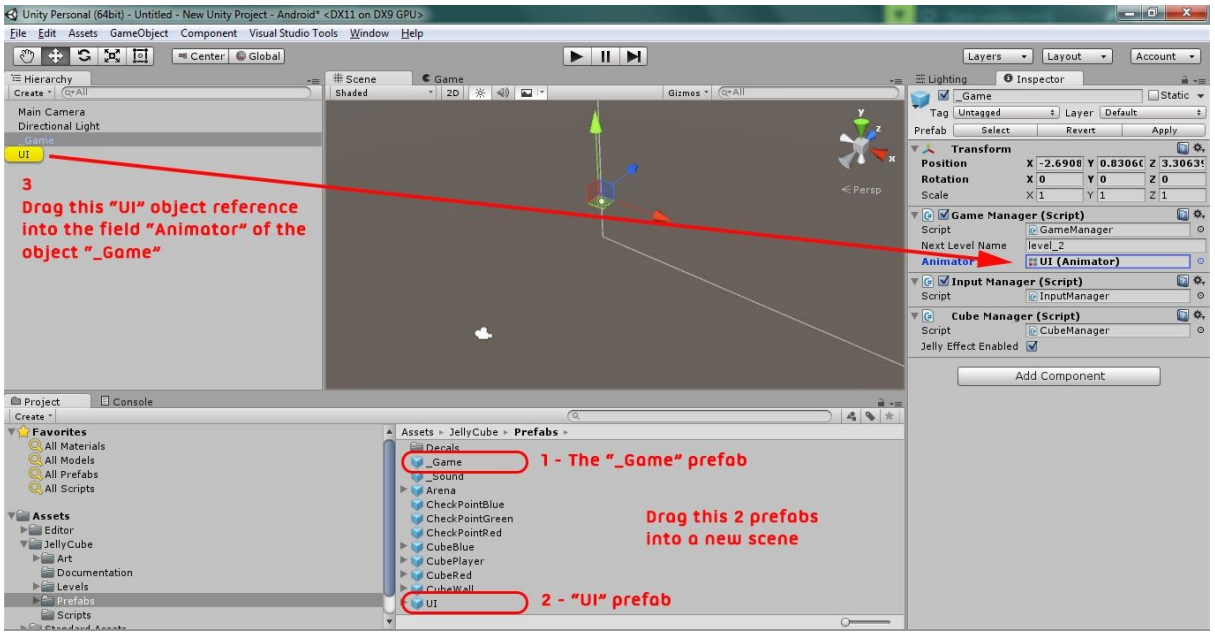
place/rotation/scale inside another game (imagine a door locker minigame puzzle rotated and scaled)

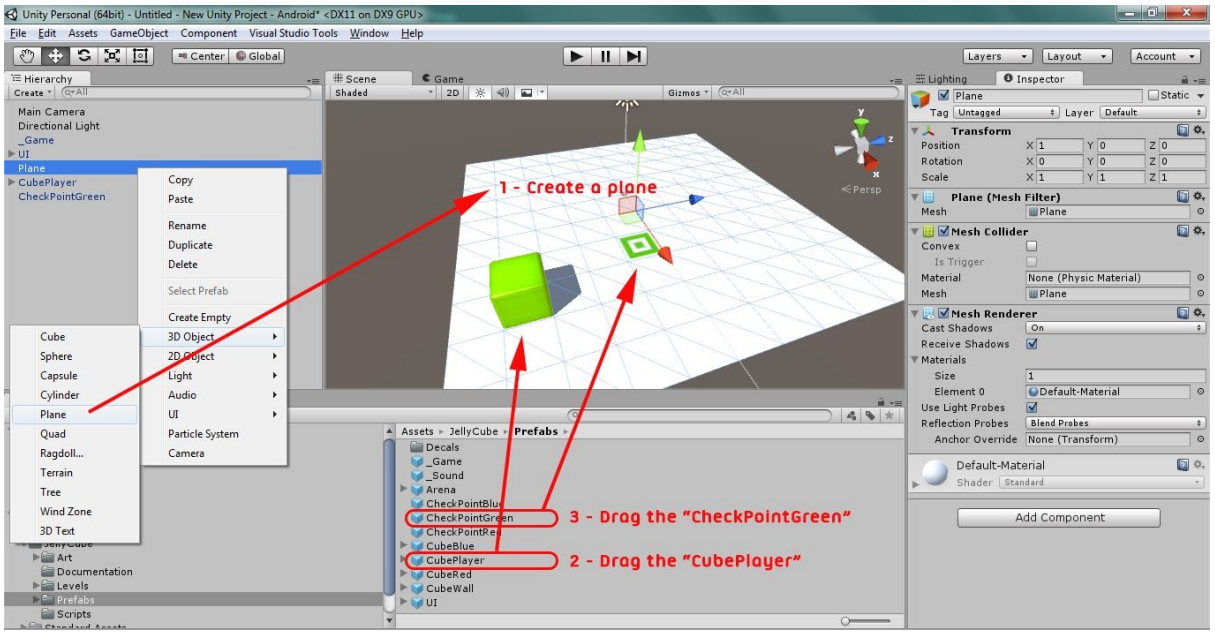
Creating new levels

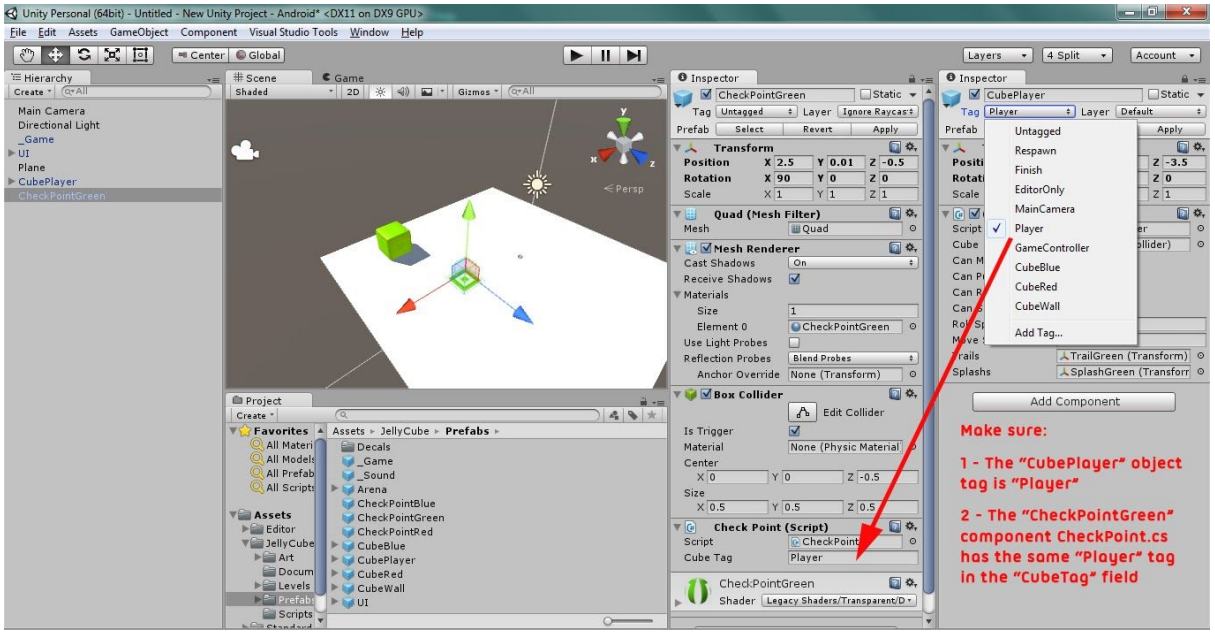
The easiest way of create a new level is opening a sample scene and "save as" a new one. Note that you need to have this level also included in the "Build Settings" (File menu) and set the “NextLevelName” field on _Game object according with your necessities.

How to setup a new scene from scratch

1 - Create a new scene
2 - Drag the prefabs “_Game”,”UI”,”CubePlayer”,”CheckPointGreen”
3 - Select the “UI” object in the Hierarchy and drag into the field “Animator”, inside the “_Game” properties
4 - Create a plane, setup your camera, and press play!





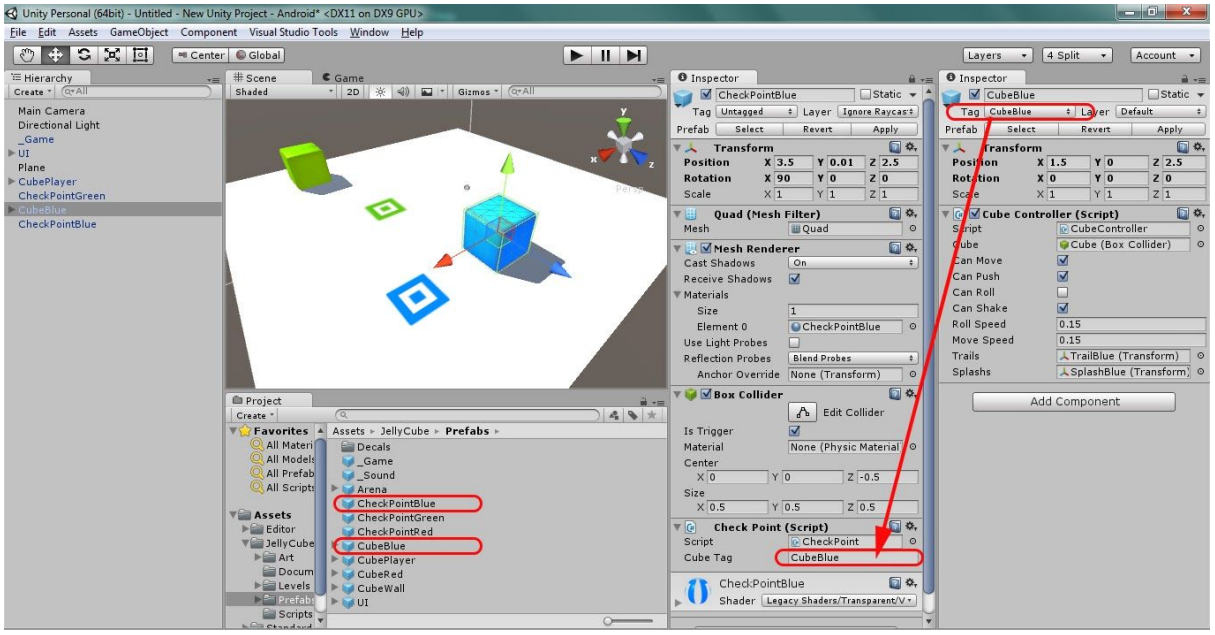


All objects are 1x1 in Unity 3d units.

You should use the grid to help your development

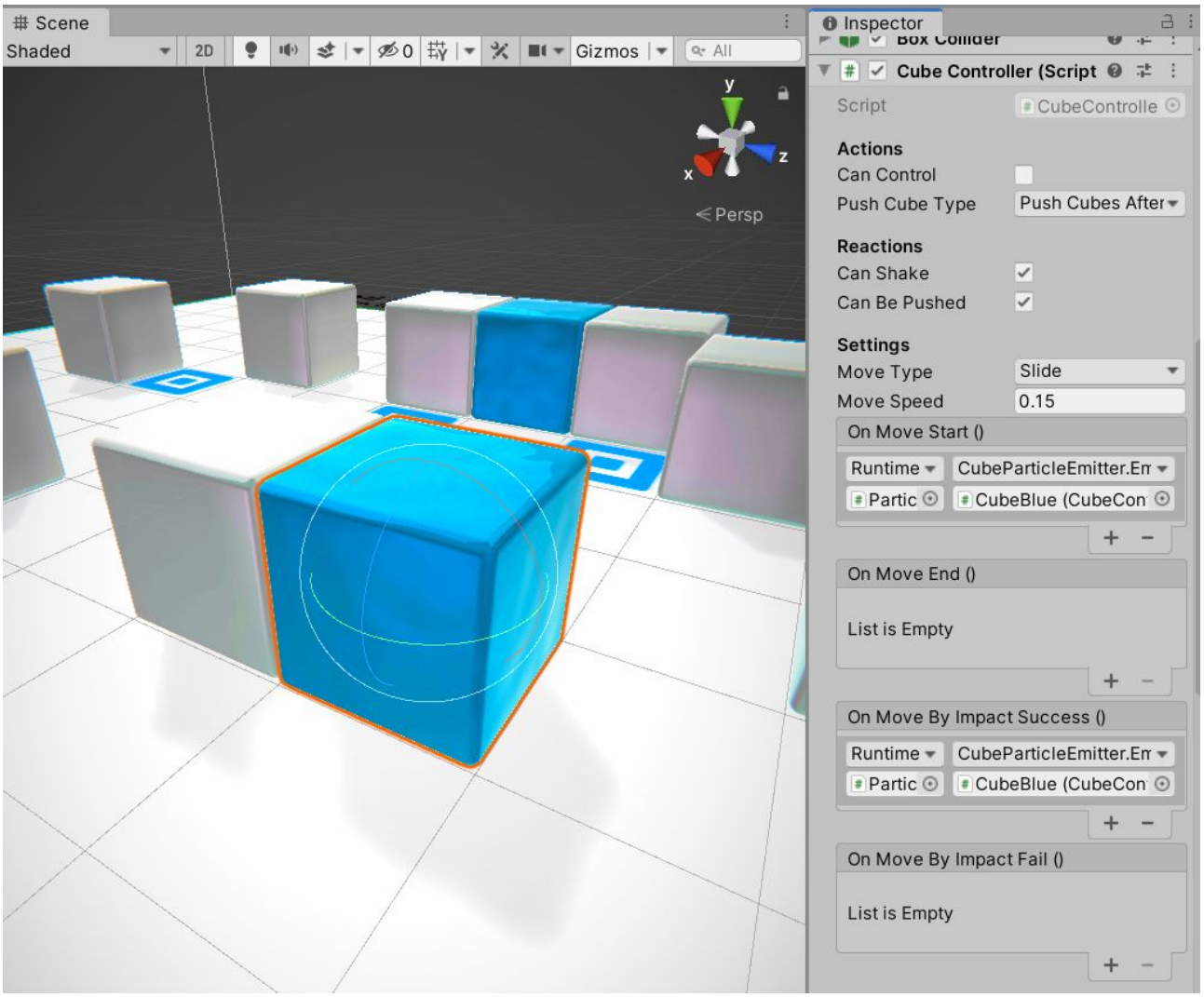
How to setup different cubes

1 - Drag the “CubeBlue” and “CheckPointBlue” prefabs into your scene.
The “CubeBlue” tag name needs to be the same to its respective “CubeTag” name in the “CheckPointBlue” object. The tag name only need to be relative to the cube color. This means you can have multiple blue cubes with the “CubeBlue” tag selected.



Note: *you only need to set a tag for a cube if you wants the player pulls this cube into a checkpoint. So if you just need a helper cube (a cube to pull, roll, or an obstacle) you don´t need a checkpoint.*

Cube Settings



The CubeController has 4 basic sections: Actions, Reactions, Settings and UnityEvents.

Actions

Can Control: *check this box if you want to control this cube using touch or keyboard*
Push Cube Type: *select what this cube will do when it hits another cube. It can try to push its neighbor cube when it starts to move (sokoban like) or when finish to move (default Jelly Cube Settings).*

Reactions

Can Shake: *when another cube hit this cube, it will shake.*
Can Be Pushed: *check this option if you want this cube moves after a moving cube collision.*

Settings

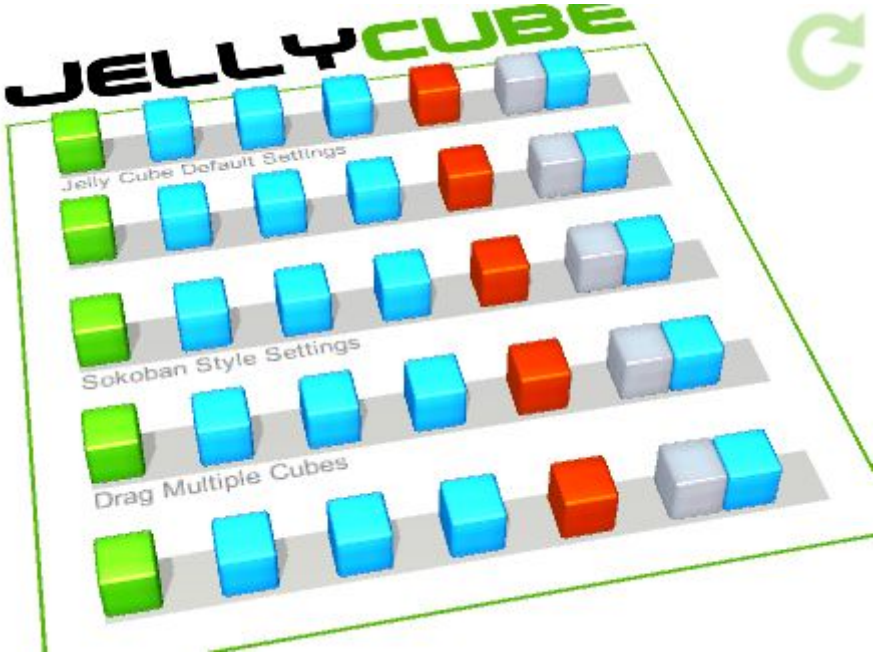
Move Type: *select between roll or slide animation*
Move Speed: *set the animation speed*

Unity Events

OnMoveStart: trigger when player start to move a cube
OnMoveEnd: trigger after a move finishes
OnMoveByImpactSuccess: trigger when another cube tried to push the cube
OnMoveByImpactSuccess: trigger when another cube tried to push the cube, but fails

Cube Behaviours

Check the level cube_behaviours to play with different settings.



Select each cube and look the CubeController component to understand how it works. It´s possible to create several puzzles and gameplays using this settings. The jelly cube example levels only uses the first settings.

Check also the sokoban style level, to try a new gameplay.

If you have any question, don't hesitate to send me an email!

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