

<Rubik's cube simulator>

Revision: 0.0.0

GDD Template Written by: Benjamin "HeadClot" Stanley

Special thanks to Alec Markarian
Otherwise this would not have happened

License

If you use this in any of your games. Give credit in the GDD (this document) to Alec Markarian and Benjamin Stanley. We did work so you don't have to.

Feel free to Modify, redistribute but **not sell** this document.

TL;DR - Keep the credits section of this document intact and we are good and do not sell it.

Overview

Theme / Setting / Genre

Core Gameplay Mechanics Brief

Targeted platforms

Monetization model (Brief/Document)

Project Scope

Influences (Brief)

- <Influence #1>

The elevator Pitch

Project Description (Brief):

Project Description (Detailed)

Core Gameplay Mechanics (Detailed)

- < Rubik's cube movement >
- < Rubik's cube scrambler >
- < Rubik's cube reset >
- < Camera movement >

Story and Gameplay

Story (Brief)

Story (Detailed)

Gameplay (Brief)

Gameplay (Detailed)

Assets Needed

- 2D
- 3D
- Sound
- Code

Schedule

- <Prefabs and the scenes >
- <Cube generator and reset>
- <Cube rotate animation and camera movement>
- <Cube scrambler with the pattern displayer>
- <Background music>
- <Testing and bug fixing>

Overview

Theme / Setting / Genre

- <Simulator>

Core Gameplay Mechanics Brief

- <Rubik's cube movement>
- <Rubik's cube scrambler>
- <Rubik's cube reset >
- <Camera movement>

Targeted platforms

- <PC>

Monetization model (Brief/Document)

- <Free to play>
- <The game will not have monetization of any kind >

Project Scope

- <Game Time Scale>
 - 3.500 euros
 - 12 weeks
- <Team Size>
 - <Core Team>
 - Cotut Raul
 - developer
 - <Full time 3.500 euros>
- <Licenses / Hardware / Other Costs>
 - Unity - free license
 - Hardware, personal computer
- <Total Costs with breakdown>
 - 3.500 euros for the employee

Influences (Brief)

- <Influence #1>
 - <Real Rubik's cube>
 - Because the game is base on the real Rubik's cube puzzle

The elevator Pitch

<Do you ever wanted to learn to solve the Rubik's cube puzzle, but you don't want to buy it, try it and then leave it covered in dust? Now you can with our game.>

Project Description (Brief):

It's a game that simulates a real life Rubik's cube, perfect for new cubers who never tried one before. It can be also be use in addition with a real life puzzle, by using the generated scramble on the physical object.

Project Description (Detailed)

It's a game made in Unity game engine, using C# as the main programing language. The game will be PC exclusive and will be played using the mouse and keyboard.

Core Gameplay Mechanics (Detailed)

- < Rubik's cube movement >
 - <Details>

You can rotate each face of the Rubik's cube, so you can solve it.
 - <How it works>

You just need to press the key for the specific face and then an animation of the rotation while show off.
- < Rubik's cube scrambler >
 - <Details>

It's a feature that scrambles automatically your puzzle and displays the random pattern.

- <How it works>

You just press the dedicated key and the cube will start scrambling. It will even show you the random scramble.

- < **Rubik's cube reset** >

- <Details>

Simply what it says, resets the cube to the original state.

- <How it works>

On the press of a key the cube will come back to it's original solved state.

- < **Camera movement** >

- <Details>

The possibility to rotate the camera around the cube, so you can solve it. You can even zoom in or out.

- <How it works>

By right clicking on the screen and then move it in the direction you want to rotate the cube. You can also use the scroll to zoom in and out the cube.

Story and Gameplay

Story (Brief)

<It will be no story mode>

Story (Detailed)

<The game is a simulator and so it does have any story>

Gameplay (Brief)

<The Summary version of below>

Gameplay (Detailed)

The gameplay is describe pretty much in the core game mechanics section and by default the game is self-intuitive all you need to know to play it

is the keyboard bindings which can be found in game, in the controls list in the main menu.

Assets Needed

- 2D

- Textures

- 7 materials color, one for each face of the cube (red, green, yellow, blue, white, orange), and one black for the inner part of the cube
- 2 images, one for the main menu and one for the controls guides
- 1 icon for the game launcher

- Scenes:

- main menu with a canvas witch was 3 buttons, one goes to main game scene, another to the controls list and last one quits the game.
- game scene in which we have the Rubik's cube a slider for the volume of the background music, a back button and the scramble random combination that appears when the gamer press the key for the scrambling feature.

- 3D

- Prefabs

- one object made from a cube with six rectangles for each face of the cube dyed in the specific colors of an Rubik's cube. From this prefab the code will generate a bigger made from 27 little cubes
- main camera which rotates around the cube generated by the script

- Sound

- Sound List (Ambient)

- Background

- panumoon_-_sidebyside_2, an not copy righted song played in the gameplay background

- Code

- Scripts:

- 'Buttons' -> used to specify each button action.
- 'CameraCode' -> which controls the camera rotation around the cube and the zoom in/ zoom out.
- 'CubeCode' -> this is the main script that generates the cube on game start, responsible with the scramble animation by a random pattern, the rotation animation for the specific face of the cube selected by the gamer and the reset to the solved cube.
- 'CubePanels' -> is used just for an visual experience script that removes the inner rectangles of each little cube.
- 'VolumeChanger' -> changes the volume of the background music based by the in game slider.

Schedule

- <Prefabs and the scenes >
 - 2 week
- <Cube generator and reset>
 - 2 weeks
- <Cube rotate animation and camera movement>
 - 2 weeks
- <Cube scrambler with the pattern displayer>
 - 3 weeks
- <Background music>
 - 1 weeks
- <Testing and bug fixing>
 - 2 weeks