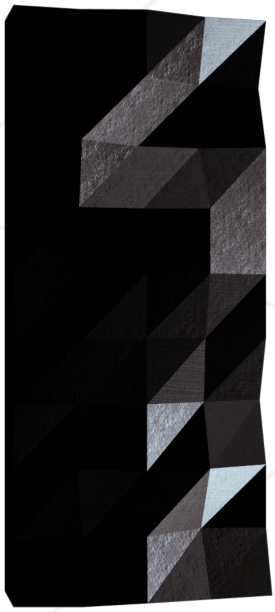

Oh-oh-Ho-ho... in the shadows!

Project Game engine

Summary: In this project, you will code a whole game using a game engine.

Version: 5

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Chapter I

Preamble

This preamble is loosely based on what you're about to do:

No sleep
No sleep, until I'm done with finding the answer
Won't stop
Won't stop before I find the cure for this cancer

Sometimes
I feel like going down, I'm so disconnected
Somehow
I know that I am haunted to be wanted

I've been watching, I've been waiting
In the shadows for my time
I've been searching, I've been living
For tomorrows all my life

Oh oh oh oh
In the shadows
Oh oh oh oh
In the shadows

They say
That I must learn to kill before I can feel safe
But I,
I'd rather kill myself than turn into their slave

Sometimes
I feel that I should go and play with the thunder
Somehow
I just don't wanna stay and wait for a wonder

I've been watching, I've been waiting
In the shadows for my time
I've been searching, I've been living

For tomorrow's all my life

Lately, I've been walking, walking in circles
Watching, waiting for something
Feel me, touch me, heal me, come take me higher

I've been watching, I've been waiting
In the shadows for my time
I've been searching, I've been living
For tomorrow's all my life

I've been watching
I've been waiting
I've been searching
I've been living
For tomorrow's

Oh oh oh oh
In the shadows
Oh oh oh oh
In the shadows
I've been waiting

In the shadows - The Rasmus

Chapter II

Introduction

In this project, you will develop a game close to Shadowmatic. Here is the goal of the game: the player must use an object in the foreground to create a shadow that looks like a familiar shape in the background. Visit the game's website to get a clearer understanding:
http://www.shadowmatic.com/

If you own have a smartphone, you can even download it to try it!

Chapter III

Objectives

The aim of this project is to make you implement a simple game from A to Z using a game engine.
The game design is not too complex, but it requires a little creativity.

Chapter IV

General instructions

- This project was initially designed as a Unity project, but you can use any game engine (such as Unreal Engine, Unity...) and its associated scripting language.
- There are no imposed coding style here. It is still recommended to adopt an existing coding style for clarity.
- You must sort out your project assets in folders. Each folder will contain just one type of asset. For instance: "Scripts/", "Scenes/", "Sprites/", "Prefabs/", "Sounds/", "Models/", ...
- You cannot use an Asset Store. Try to find assets on the web, except the scripts, of course, because you're supposed to write everything you turn-in. You can use your game engine standard assets.
- Evaluation will be a peer-evaluation.
- For the evaluation, you will have to build the game to test it. The assessor will build the game, so you have to push all the necessary elements. Thus, your project must be accurately configured for the build. There will be no last minute setting.

Chapter V

Mandatory part

V.1 The game

In the original Shadowmatic game, there is one or several objects set in the foreground. The player can rotate these objects. The aim is to reproduce recognizable shapes with the shadow of the object projected in the background.

V.1.1 Menu

Your game must display a start menu proposing 2 different game modes:

- Normal mode will take the player on a path containing different puzzles. Difference between a solved puzzle and a unlocked one must be clearly visible.
- Test mode will take the player on a path where all the puzzles will be unlocked so he can test each of them during the evaluation.

This also means the player advancement will have to be saved. For the mandatory part, one save per "device" will be enough.
Your puzzles must have a name containing a clue about the shape you will obtain with the shadow. Just like in the original game, you must not show the final shape to the player.

`A puzzle called "Meow" will give a clear hint that the shape is expected to be a cat.`

V.1.2 Gameplay

The game must be played with a mouse only. One key of the keyboard will be tolerated in association with a click (CTRL, for instance) to to move the objects in different manners.

Your game must be playable. This means the shadow validation management must be neither too demanding, nor too permissive. If it needs to be pixel perfect, it will be to tough, but a 50 pixels difference will be too tolerant.

When you consider the shadow on the wall will match the required shape, a message will appear to congratulate the player and a menu will pop to allow them to quit or return to the main menu to observe the beautiful animation you will have created to show a puzzle has been solved and the next one gets unlocked.

Objects must move smoothly.

V.1.3 Different difficulty levels

Your game will include 3 difficulty levels over different puzzles:

1. One object the player can apply horizontal rotations to.

2. One object the player can apply horizontal and vertical rotations to.

3. Many objects the player can apply horizontal and vertical rotations to and move around.

To differentiate the rotation and the movement, you can combine the mouse click with a keyboard key.

`Click and drag : horizontal rotation. (Click + CTRL) and drag : vertical rotation. (Click + Shift) and drag : object movement.`

You must create at least one puzzle for each level.

Assets are provided to create mandatory puzzles, but you're free to use others ones.

Chapter VI

Bonus part

You can consider 4 different bonusses only if the mandatory part has been perfectly completed:

- Beauty: you have implemented nice textures, your menu is killing it, the path between puzzles awesome... In other words, your game looks damn good.
- Creativity: you have implemented more levels than required in the mandatory part.
- Immersion: You have a great soundtrack to the game. The player can switch it on and off through a menu containing other options (keyboard option, window size...)

`The bonus part will only be assessed if the mandatory part is PERFECT. Perfect means the mandatory part has been integrally done and works without malfunctioning. If you have not passed ALL the mandatory requirements, your bonus part will not be evaluated at all.`

Chapter VII

Submission and peer-evaluation

Turn in your assignment in your `Git` repository as usual. Only the work inside your repository will be evaluated during the defense. Don't hesitate to double check the names of your folders and files to ensure they are correct.