

FEUP Flight Club

Description

FEUP Flight Club is a 2D endless scroller video game inspired by Jetpack Joyride. You play as a M.EIC student walking on the FEUP's B hallway. In this hallway you will find professors and code bugs who will try to make your life difficult. You will also need to avoid having bad grades with the help of coffee and love.

The player is inspired by João Rosário. He can move up, down, side to side, and shoot.

Our player will encounter two types of power ups.

The first one, coffee, makes the player shoot faster, helping him defeat his enemies.

The second one, a blue circle with a hearth, is a shield, which represents "love" and "friendship", which will help you sustain a hit that would otherwise kill you.

For the score, we have two scoring mechanisms, the first one is a simple distance value which increases 5 per meter, the second one is made up only of collectibles. The final score is calculated by distance points + 2 * collectibles. This score is shown when the player dies.

For collectibles, we have coins that are worth 1 FEUP dollars and a diamond that is worth 15 FEUP dollars. Coins either appear in a box of 5x2 or in a pattern that reads "FEUP" and they only move horizontally. Diamonds appear alone and have both horizontal and vertical movement.

Our player will only encounter one type of obstacle, a Failing Grade. The Grade is a simple obstacle that only moves horizontally.

The main threats to the player are the Professor enemy and the Bug enemy. They both spawn off-screen and move until they reach the rightmost third of the screen.

The Professor follows the player in the Y axis and shoots at the player. When it gets to 1/3 of its health, it shoots a bigger bullet.

The second one is a Bug in the code that stops on the spot and starts growing. When it stops growing it will charge in the direction of the player.

In order for the game to not feel too repetitive we created a Spawner class that tries to spawn objects in a semi-random way. We created 3 abstract classes: Obstacles, Enemies and Collectables.

The Spawner has a list for each type of class that holds prefabs of what he can spawn. It follows the logic of Obstacles -> Enemies/Collectables -> Obstacles. The Obstacles are spawned in waves of 5 to 10 obstacles. If the Collectables are coins, they are spawned in waves of 1 to 6 groups of coins (except "FEUP" pattern).

Installation

1. Download the game from *link*
2. Unzip the Game
3. Run

Instructions

- **Space**: moves the player Up and Down
- **A**: moves the player to the left
- **D**: moves the player to the right
- **Mouse1**: Shoots bullets

Group Members

João Rosário up201806334

Bernardo Ramalho up201704334

João Rocha up201806261

Highlights

We can proudly say that sprite animation is on the better side, even tho that doesn't really count towards the project. Besides that, the professor enemy, at least for us, is quite fun to fight against and makes for an interesting challenge.

Resources

Acquired on the internet

- The Bug Enemy (<https://www.pngwing.com/pt/free-png-ppiyg/download>)
- The Projectiles used (<https://ansimuz.itch.io/warped-shooting-fx>)
- Diamond (<https://gamer247.itch.io/diamante>)

Made by hand

- Using Piskel (<https://www.piskelapp.com/>)
 - The Player
 - The Background
 - The Professor Enemy
 - The Coins

