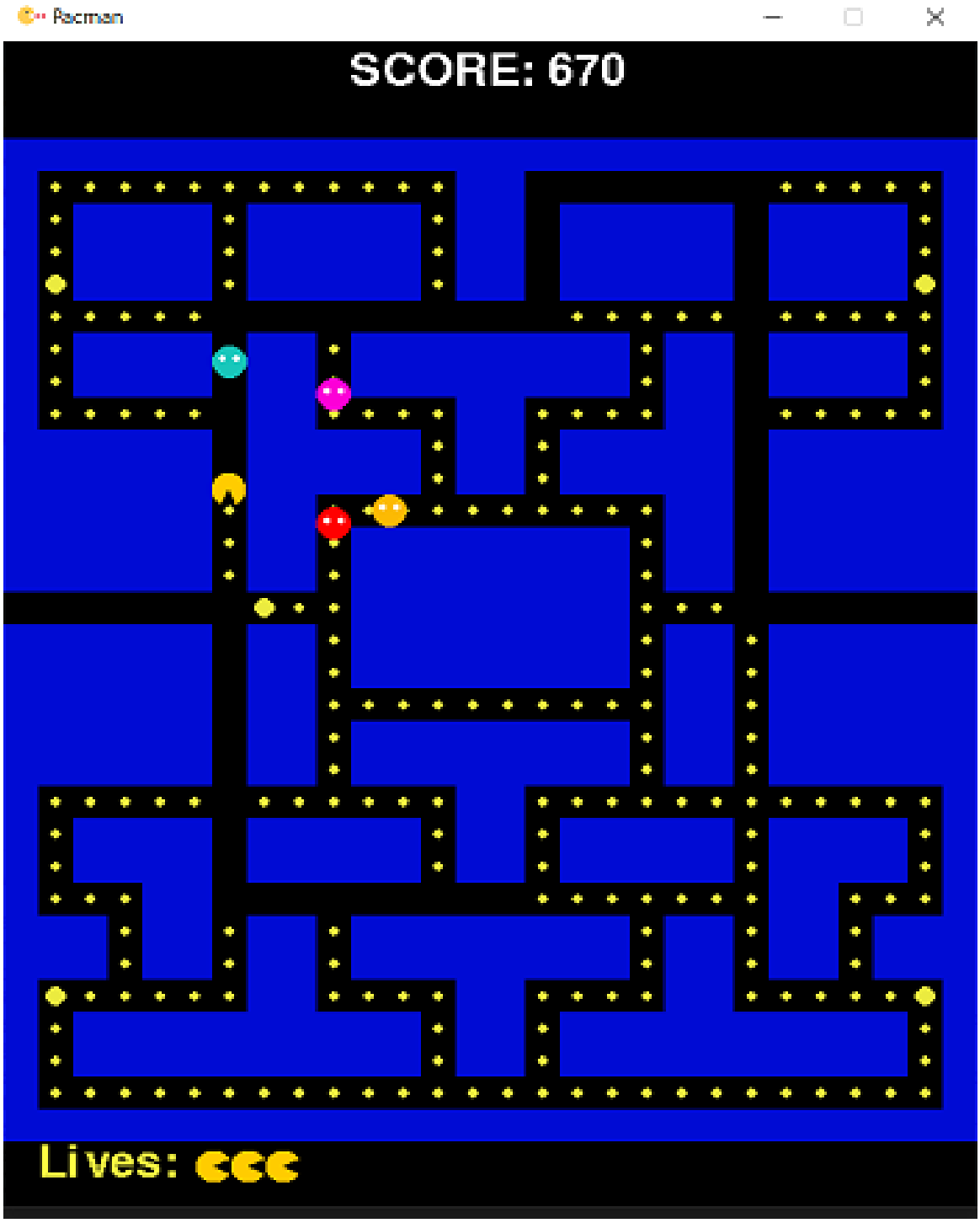
PACMAN



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1.Introduction

The purpose of this project was to create a copy of the Pacman from 1980. The goal of the game was to collect all coins from around maps, avoid ghosts, that eat your lives and finish all maps, while getting the highest score possible.

2.Structure:

The whole game is based on a python library pygame, it enables to display screen, communicate with the user and generally is created to make games in it.

a)game.py:

This file is responsible for running a programme, contains:

-Game class that has attributes like player, ghosts, screen that things are displayed on, it has methods that enable all the interactions between all objects that are attributes of the game. It also contains methods that enables users to save and load the game, see the highscores and add their scores to the highscores table. Its main method is run which for 60 times a second displays new screen and updates all the attributes.

To use the programme the method run() has to be called.

b)pacman.py:

This file contains classes that are enabling the Game class to work like:

-MovingObject class is a parent class of player and all ghosts, it contains most of the changing direction and moving methods, that the rest inherits from.

-Player class has methods that enable user control the pacman and also has method which displays it on screen while the game is running.

-Ghost class that parents other four ghosts which are actually in the game, it contains methods that navigate ghost to their normal destination (which is set for each ghost separatly and different) by fastest way possible, also contains modes setters and for each mode ghosts behave differently.

Ghost classes that inherit from Ghost and are in game:

*GhostRed

*GhostPink

*GhostOrange

*GhostBlue

-Wall class which can be displayed on screen as blue rectangle 20x20 pixels

-EatableObject class which is a parent class of Coin and PowerupCoin, which also can be displayed on the screen and are represented by yellow dots.

c)settings.py:

All game, ghosts, player, screen, colors settings and pygame events are imported from this file so its easier to change for example player's speed or ghosts' starting positions.

d)maps:

Folder which contains files that the maps are created from.

e)photos:

Folder which contains player and icon png file.

3. Instructions:

To start the game you have to press the spacebar in the start screen, when done game immediately starts, to win the game you have to collect all coins from the map, after it the next map starts, which is different than previous, the goal in this map is the same, after completing second map the third launches, this is the last map once you complete it the win screen appears and you can write here your name so your score is assigned to you in highscores, by pressing space you go to start screen. However finishing all three maps is not as easy as it seems, because there are ghosts chasing you all the time and each time they catch you you lose one of your 3 lives and if your life count drops to 0 the game is over and game over screen appears where you can write your name and assign score to your name, by pressing space you can go back to start screen. On the map there are bigger coins, when you consume them you get a powerup which makes ghosts start running away from you and the collision with ghost gives you points and makes them go to their starting positions. While in game you can pause game by clicking the escape

buton, the game is also saved in that moment, you can load it by pressing L button in the start screen. In the start you can also press H button to see the top 8 scores displayed with names of player, to go back press Escape button.

4.My feelings about the project

First after receiving this project I had no idea where to start and how to do it, I also thought It will be really challenging and I will learn a lot.

Now I know I wasn’t mistaken, because most of things were not trivial and made me read the pygame documentation which is a really large lirbrary for long hours. Also I had to find solutions to many problems myself for example pacman detecting walls and not walking through them. I have finished every element of the task, the game is playable and actually challenging for the player and I also find It really fun to play.

I think my project was very difficult by itself and compared to other projects I feel like It was one of the hardest to do. I had to spent a lot of time on it, but It made me learn much about how the games work and I found it really interesting. Because of this things I would rate It maximum for the implementation and for the functionality.