

Final project

Abzal Orazbek

Sources

GitHub: <https://github.com/abzy128/pygame-d2>

Design

I really like Destiny 2. It is a video game by Bungie Inc. So, as a theme of my final project I chose Destiny 2.

One of the easy to make genres of games is 2D platformers, so I went with what.

I wanted to use assets from the game, so I did some research to find resources I need.

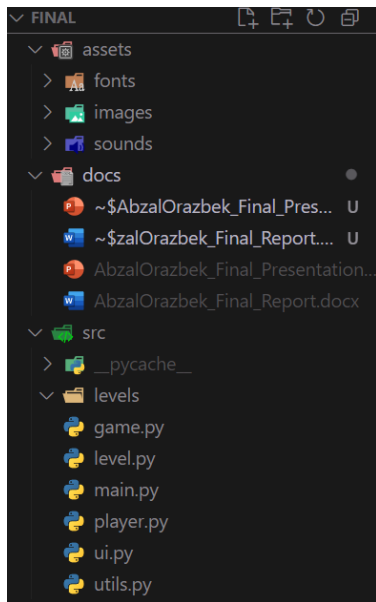
Assets



Here is an example of 3 main assets. Hive thrall is a trap, and it can explode damaging the player. Player is a Guardian from the game. The last one is a reward for the player, sort of like a coin. It is called Engram in the game.

Code

I wanted to make a game with good file and code architecture, so I came up with this:



Here, all files are split up into their respective directories. “src” is source code, “docs” is for documentation (you are reading it right now) and “assets” is for assets.

Here is the code of the Player:

```
4 class Player(pygame.sprite.Sprite):
5     def __init__(self, spawn_position, image_path):
6         super().__init__()
7         self.image = pygame.image.load(image_path).convert_alpha()
8         self.image = pygame.transform.scale(self.image, (30, 40))
9         self.rect = self.image.get_rect(topleft=spawn_position)
10        self.velocity = pygame.math.Vector2(0, 0)
11        self.speed = 5
12        self.gravity = 1
13        self.jump_force = -30
14        self.on_ground = False
15        self.hp = 3 # Initial health points
16
```

As we can see, player’s image is loaded from a file, it has certain velocity, speed, gravity, jump force, on ground conditional and health points.

Levels are stored as JSON:

GuardianPhotographer: <https://guardianphotographer.com>