Backlog - G80

Project description (GameLoop.java):

A top-down shooter game with a main character that shoots at endless spawning enemies that have different abilities and mechanics with the goal of staying alive for as long as possible, while also dropping coins used for upgrades.

Learning objectives:

1. Git (source control): We used git to increase efficiency of the workflow, spending our time working on adding different features and merging them together.

2. File access: Reading and writing using .TXT files to store the score of the player and create a leaderboard that keeps track of all the highscores.

Game Features and Functionaliy:

1. **Name:** Developing the main character (Player.java)

How to demo: We check if the character can move using key input and if it interacts with the enemies (collides) and if it can shoot periodically on mouse input.

Notes: Rendering by painting a JPanel component, learning how to render on swing components, basic programming.

2. **Name:** Developing the enemies (Enemy.java, Enemy2.java)

How to demo: We check if the enemies spawn in the playing field randomly and whether they attack the player and remove hitpoints on collision, as well as if they drop coins once they are slain.

3. **Name:** GUI (inside GameLoop.java)

How to demo: For the GUI, we are going to implement a visible health bar linked to the player's HP level, a score that increases based on time spent alive, the player's stats (HP, DMG, SPEED, FIRERATE, BULLETSPEED) and total number of coins and a button that changes the scene to the shop.

Notes: Rendering by painting a JPanel component, learning how to render on swing components, basic programming.

4. **Name:** Shop (ShopScreen.java)

How to demo: We check if the shop menu pops up once the key P is pressed and whether the powerups and abilities acquired subtract from the total coin amount and the effects apply on the player.

Notes: Rendering by painting a JPanel component, learning how to render on swing components, basic programming + modifying public instance variables between classes and calling outside methods.

5. **Name:** Game Over Screen (GameOverScreen.java)

How to demo: Once the player HP reaches 0, a function is called that stops the main program from running and switches the scene to a Game Over scene, showing the final score and a button that goes into the Highschore board.

Notes: Rendering JSwing elements, switching scenes.

6. **Name:** Highscore board (GameOverScreen.java)

How to demo: A text form pops up to get user key input for entering the name and then saves the highscore with the name and orders it in the main list from highest to lowest.

Notes: Writing in the .txt file + rendering JSwing elements.