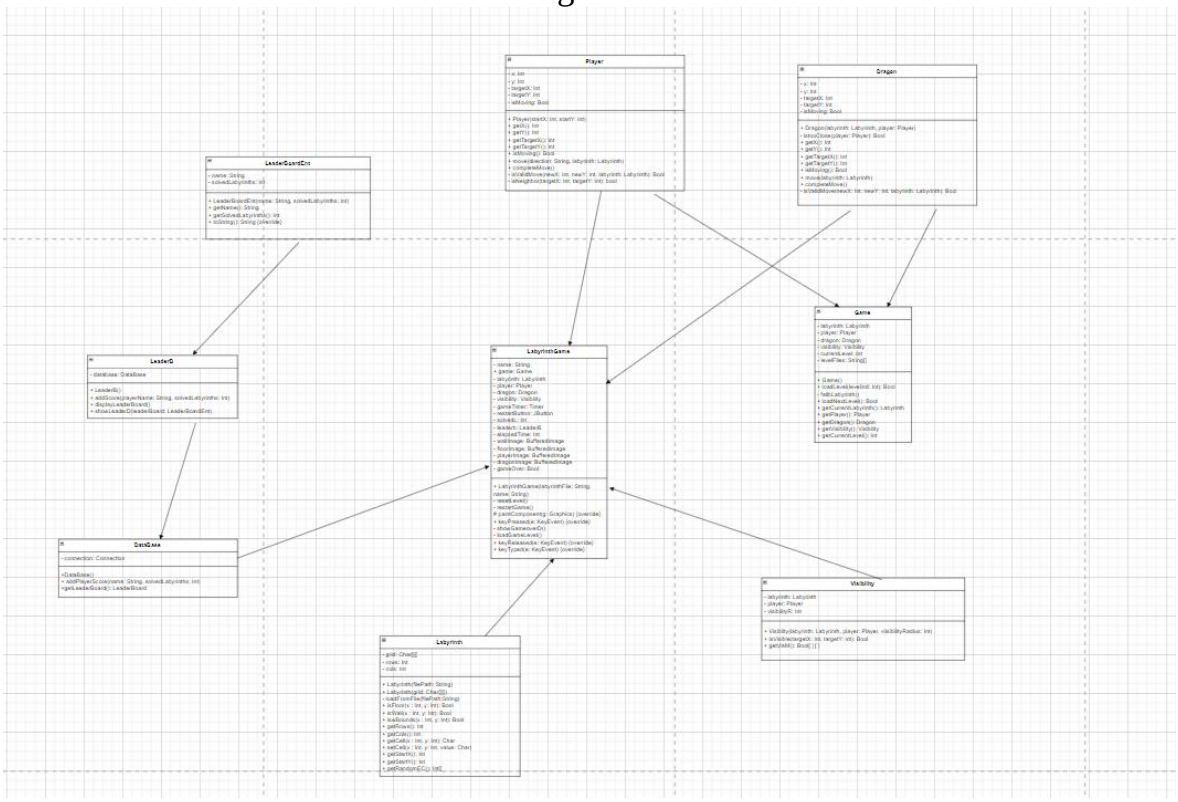
Name: Hasanli Ramal 3 Assignment. 3rd task 10 December 2024

Neptun code: W5DRFC

Task

Create the Labyrinth game, where objective of the player is to escape from this labyrinth. The player starts at the bottom left corner of the labyrinth. He has to get to the top right corner of the labyrinth as fast he can, avoiding a meeting with the evil dragon. The player can move only in four directions: left, right, up or down. There are several escape paths in all labyrinths. The dragon starts off from a randomly chosen position, and moves randomly in the labyrinth so that it choose a direction and goes in that direction until it reaches a wall. Then it chooses randomly a different direction. If the dragon gets to a neighboring field of the player, then the player dies. Because it is dark in the labyrinth, the player can see only the neighboring fields at a distance of 3 units. Record the number of how many labyrinths did the player solve, and if he loses his life, then save this number together with his name into the database. Create a menu item, which displays a highscore table of the players for the 10 best scores. Also, create a menu item which restarts the game. Take care that the player and the dragon cannot start off on walls.

Class Diagrams

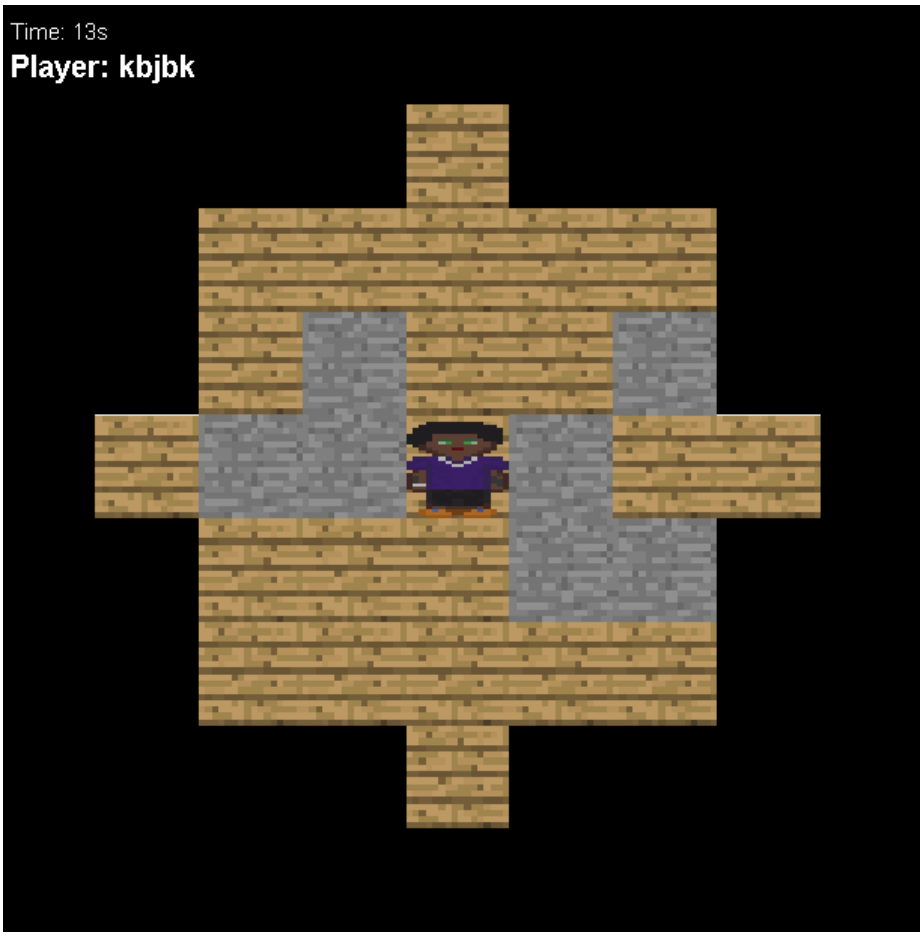


Plan

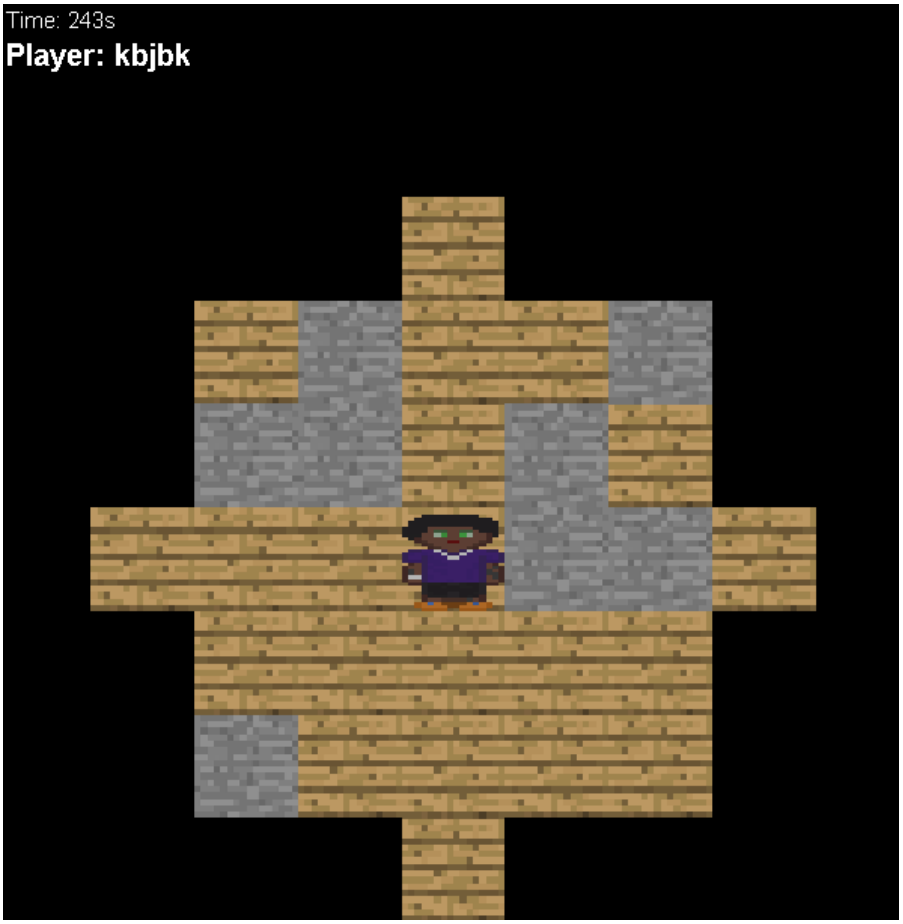
1. Main.java - The entry point of the application.
2. LabyrinthGame.java - Core game logic and graphical interface.
3. **Game.java** - Manages the loading and transition between game levels
4. Labyrinth.java - Represents the game labyrinth (grid-based map).
5. Player.java - Represents the player entity in the game.
6. Dragon.java - Represents the dragon entity and its behavior.
7. Visibility.java - Handles visibility logic in the labyrinth.
8. LeaderB.java - Manages the leaderboard functionality.
9. LeaderBoardEnt.java - Represents a single entry in the leaderboard.
10. DataBase.java - Handles database operations for leaderboard storage

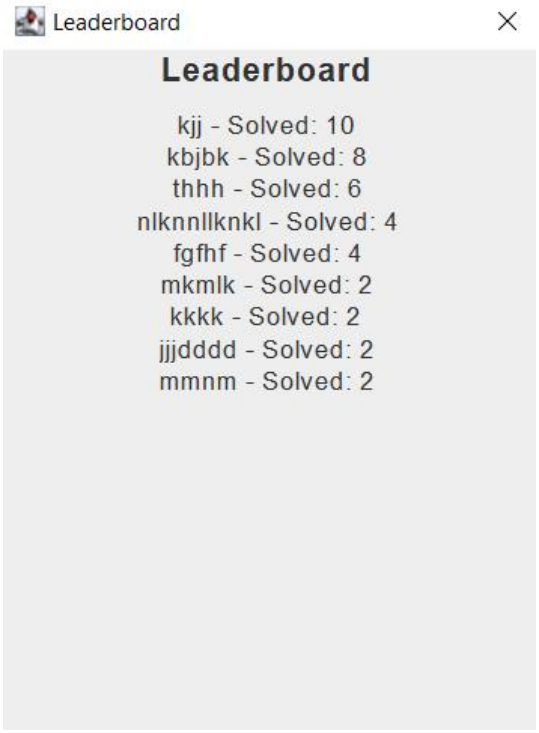
Testing

Test1. We need to check whether the visibility works or not.



Test2. We need to check whether the player stops when he touches the wall



Test3. We need to check whether the dragon stops and turns the other direction when it touches the wall

Test 4. We need to check whether the leaderboard appears after the game finishes