

Střední škola průmyslová elektrotechnická Ječná

Information Technology

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Treasure hunt

(Java 2D game)

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1 Aim of the thesis

I wanted to create a 2D game in Java where the player has to find the treasure while avoiding enemies. The game is now playable, but in the future, I would like to come back to it and improve the animations, graphics and sound.

2 Software

Development environment: IntelliJ IDEA 2024.1

Programming language: Java 21

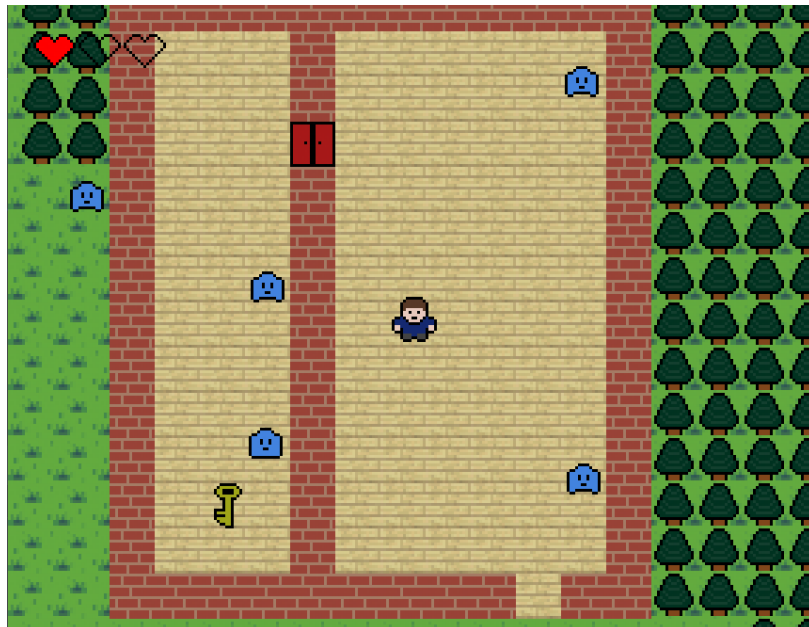
3 Game description

3.1 Game Mechanics

There are four objects in the game that the player can interact with: a door, a chest, a potion, and a key. The player moves using the WSAD keys and sprints with the Shift key. Interaction with objects happens by touch - when the player touches an object, its function is immediately performed.

The door comes in three colors (blue, green, and red), each requiring a key of the corresponding color to open. These keys are scattered around the map, and the player must find them while avoiding the monsters that patrol the area. There are a total of 30 monsters in the game, each confined to a specific area.

There is only one chest in the game. Finding and opening this chest wins the game. However, to open the chest, the player must first find the yellow key, which is hidden behind the red door.



Additionally, there is one potion hidden at the edge of the map. When the player drinks the potion, their health is fully replenished.



4 Manual

The game is controlled using the keyboard:

Holding the W key - to go up

Holding the S key - to go down

Holding the A key - go left

Holding the D key - to go right

Holding the Shift key - sprint

5 Conclusion

I had a hard time getting into game development at first, but once I started writing, I got into it right away. However, every time I had to draw something or create a map, I got discouraged. When I chose to create a 2D pixel game, I didn't expect how much I would dislike drawing squares and making maps. I had bigger plans for the game, but now, at the end, I've lost motivation and stopped enjoying the process. Despite this, I think the game is in good shape and will only get better with future improvements.

6 Resources

Used images:

[Potion](#)

[Wooden planks](#)