

Mine dodger

Gaming is something that's in the heart and culture of Spindle and we want you to create a game. This is done in a step by step approach. We are going to discuss the result after each step. After completing a step you will be given the next step to implement. In the end you will have created a game where the goal is to dodge mines while traversing the playing field. Good luck!

General requirements

- Use the programming language you are most comfortable with
- Make it a terminal/command line application
- Show us that you understand object oriented programming

Step 1: The play field

This first step in creating this game is to be able to have a playing field on which the robot and the mines are placed. We created a few playing fields for you in plain text that you need to use in your game. These are the requirements for the first step:

- Import the given playing fields into your game
- Have a command to show the available fields to play
- Have a command to choose a given field

Legenda:

* Mine
o Empty field
Wall
R robot
E exit

Step 2: Playing

The next step is to allow someone to play the game. This happens based on user input. This user input is all the moves the player wants to make to reach the end. The moves do not have to be animated on the playing field.

Requirements for this step are:

- Accept moves for playing the chosen field. All moves have to be supplied at once using a string like UDLR (UP DOWN LEFT RIGHT)
- Hitting walls does nothing
- Hitting a mine is game over
- Finding the exit is a win
- Present the outcome to the player

Step 3: Play field revisited

After playing the given play fields a few times it the game isn't the challenging anymore. We want to generate playing fields so that it's a challenge every time. The old requirement where the player chooses the map still stands. The only difference is the default fields are not an option anymore but you will need to generate a small, medium, and large playing field.

- Generate 3 different sized playing fields
- At Least 1 mine on the field
- Walls are only placed on the edges
- The robot should be positioned on a edge
- The exit should be positioned on a edge but never adjacent to the robot.
- The playing field should be completable (eg. no mine in front of the exit or robot, robot starting in a corner).