

MAZE PROJECT

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DEFINITION OF THE PROJECT

In this final project we tried to make a maze game. This game is basic but very complex at the same time. Because there are too many conditions and our algorithms must work properly.

The maze game must take the length of the maze from the user. The length must be between 10 and 100. Once you enter a length the game must generate a random maze. Then you can play the game with arrays (or maybe with entering the coordinates).

When you finish and try to play again, the game must generate another random maze. So the mazes shouldn't be the same. Every time you play, the maze must be different. Of course there should be dead end roads in these mazes.

Also in the maze there are monsters and golds. When you reach the monsters the game should start again and also the game should save the amount of golds that you collect.

And the last thing is: the game should save your moves and prints to a text file with coordinates.

ALGORITHMS AND METHODS OF THE PROJECT

In this project I made lots of functions and algorithms for solution.

Firstly I defined a matrix. Then I made a function to make the ending road. My road ends in the final row of the matrix. I made this road to go different ways(not the same direction always).

Then I made another function to create dead end roads.This function makes the maze hard but its the most important thing in this code.

Then I defined arrow keys to the program and I write a function to control the program with the arrow keys. If you enter a big length the program can work slowly but I think playing with arrow keys makes this game more playable.

Finally I made a while loop that game can continue if you are not on the finish point.

SOME SCREENSHOTS OF THE PROGRAM

```
Maze Game----- Your moves are saving to moves.txt.  
Enter the length of maze(minimum 10x10 maximum 100x100:10
```

```
Use arrow keys to play!
```

```
X--You
```

```
1--Walls
```

```
0--Roads
```


```
$--Monsters
```

```
◆--Golds
```

```
1 1 1 1 X 1 1 1 1 1  
1 1 0 $ 0 0 1 1 1 1  
1 0 0 1 0 0 0 0 1 1  
1 1 1 0 ◆ ◆ 0 ◆ 0 0  
1 1 1 0 1 0 1 0 1 1  
1 1 ◆ ◆ 1 ◆ 1 ◆ ◆ 1  
1 0 0 1 1 ◆ 1 1 1 1  
1 1 1 1 1 0 0 0 0 0  
1 1 1 1 1 1 1 1 1 0  
1 1 1 1 1 1 1 1 1 0
```

```
1 1 1 1 S 1 1 1 1 1  
1 1 0 $ 0 0 1 1 1 1  
1 0 0 1 0 0 0 0 1 1  
1 1 1 0 ◆ ◆ 0 ◆ 0 0  
1 1 1 0 1 0 1 0 1 1  
1 1 ◆ ◆ 1 ◆ 1 ◆ ◆ 1  
1 0 0 1 1 ◆ 1 1 1 1  
1 1 1 1 1 0 0 X 0 0  
1 1 1 1 1 1 1 1 1 0  
1 1 1 1 1 1 1 1 1 0
```

```
Congrats You finish the game!
```

 moves.txt - Notepad

File Edit Format View Help

Your moves in the game:

X	Y
---	---
2	0
2	0
2	1
2	1
3	1
3	1
3	2
3	2
3	3
3	3
3	4
3	4
3	5
3	5
2	5
2	5
2	6
2	6
2	7
2	7
2	8
2	8
3	8
3	8
4	8
4	8
5	8
5	8
6	8
6	8

[illegible]