Maze Runner

By: Dania Salman, Haniya Arif Khan and Radhika Khatri

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Project Proposal

Our goal for this project is to create the shortest path for a maze where the user starts at a point in the empty paths and has to reach the end without crossing the walls.
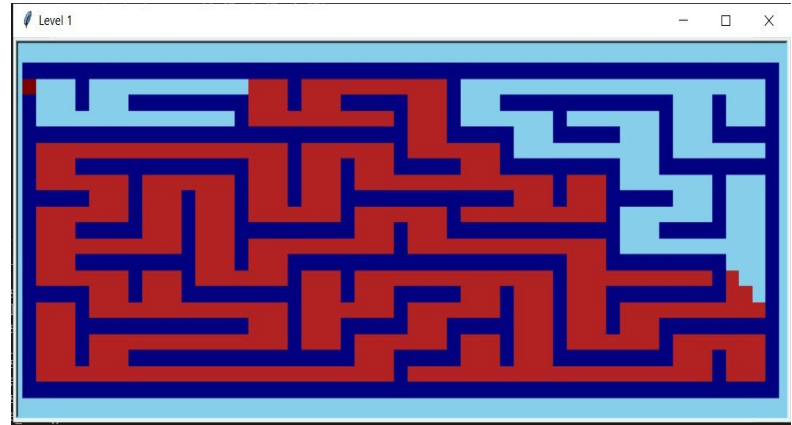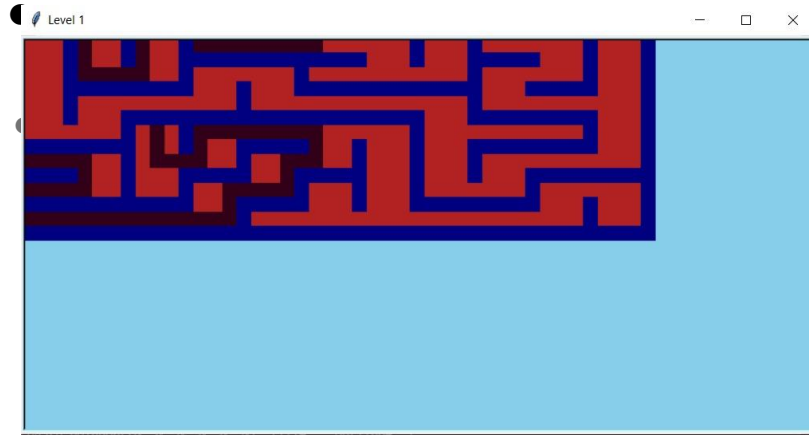
Moreover, to make the game more interactive we used graphical user interface (GUI).

Objectives

- Implementation of DSA techniques using BFS and backtracking.
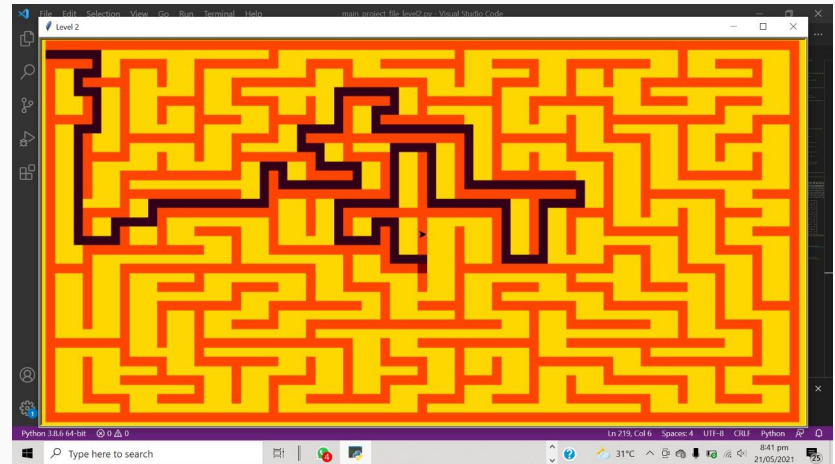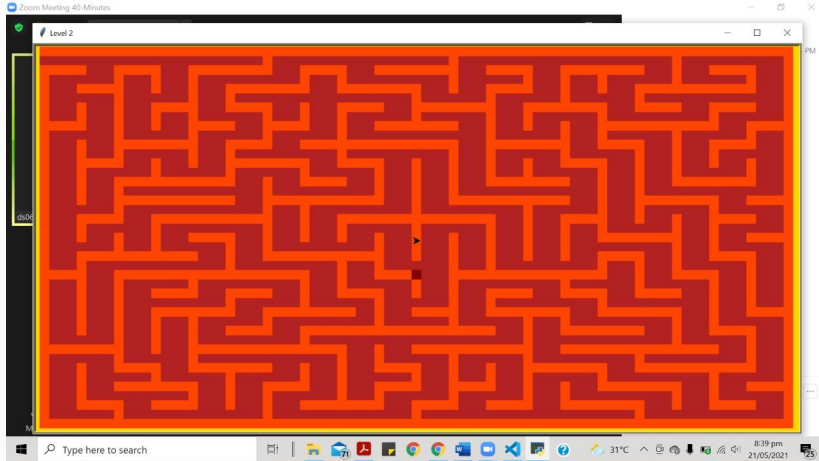- Using data structures like dictionaries, lists, tuples and queues.

Challenges Addressed (1)

- **Maze size adjustment issue.**

Challenges Addressed (2)

- **Running BFS every time you play**

Challenges Addressed (3)

- **Issue with Global Variables**

```
33    # this function creates the walls of the maze and assi
34    def create_maze_level_2(frame):
35        global begin_x, begin_y, finish_x, finish_y
36        # defining a turtle's specifications to create the
37        maze = turtle.Turtle()
```

```
PROBLEMS  6    OUTPUT    DEBUG CONSOLE    TERMINAL

PS C:\Users\khatr> & "C:/Program Files/Python38/python.exe" "c:/Users/
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Traceback (most recent call last):
  File "c:/Users/khatr/Desktop/DSA Project/main_project_file_level2.py", line 299, in <module>
    level_2()
  File "c:/Users/khatr/Desktop/DSA Project/main_project_file_level2.py", line 220, in level_2
    back_tracking(finish_x, finish_y)
NameError: name 'finish_x' is not defined
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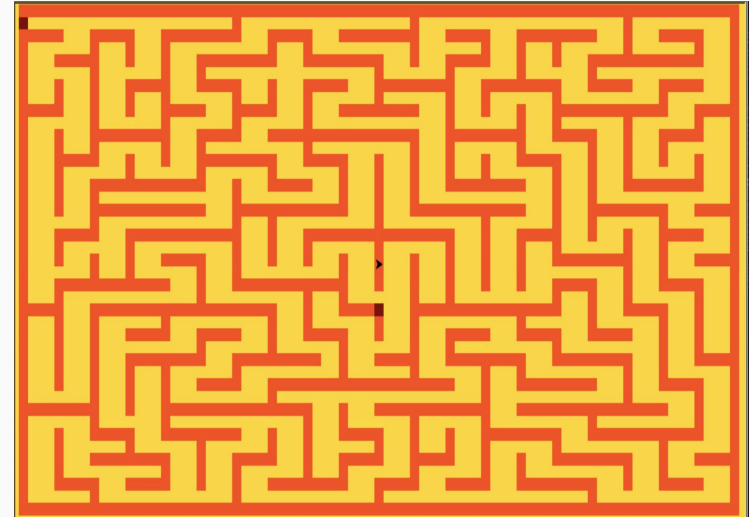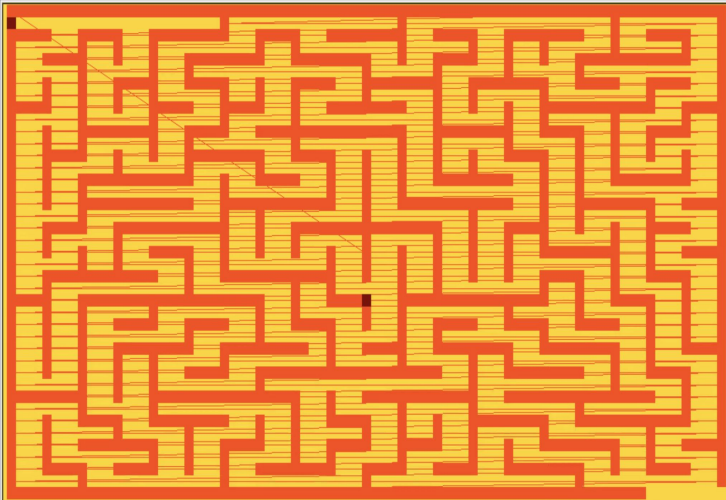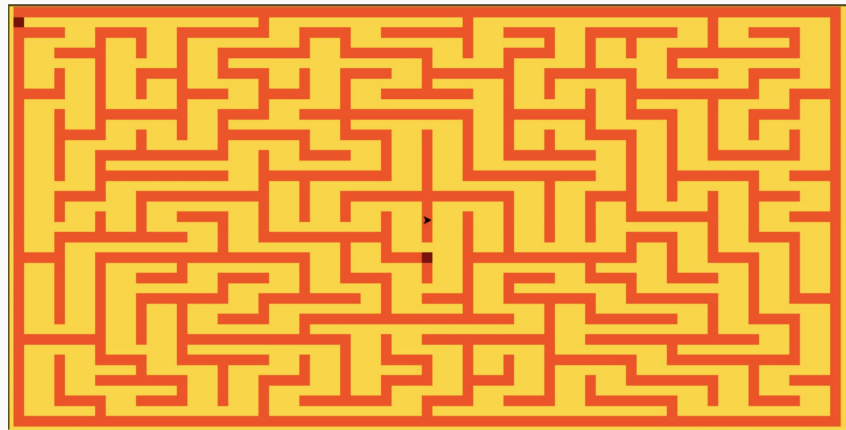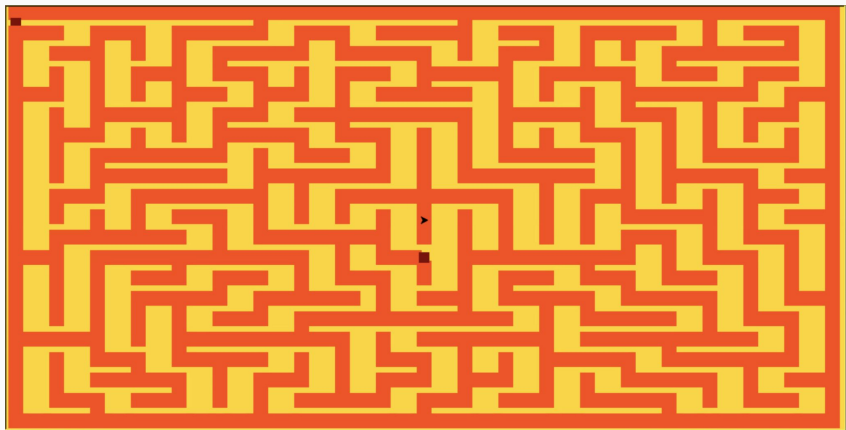
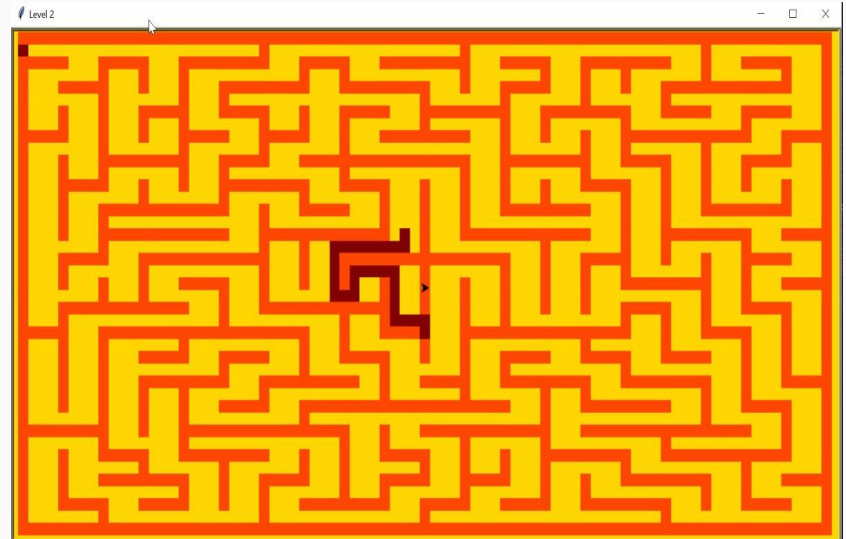# Challenges Addressed (4)
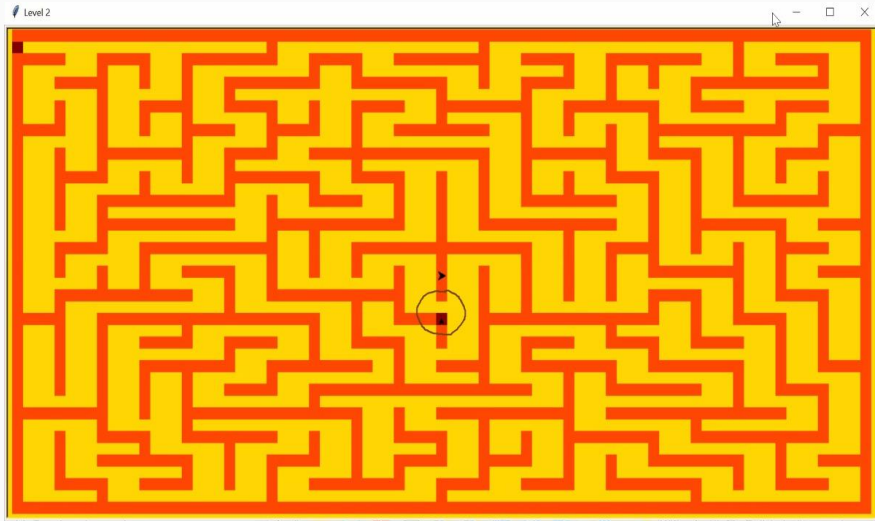
- **Pen-up issue**

Challenges Addressed (5)
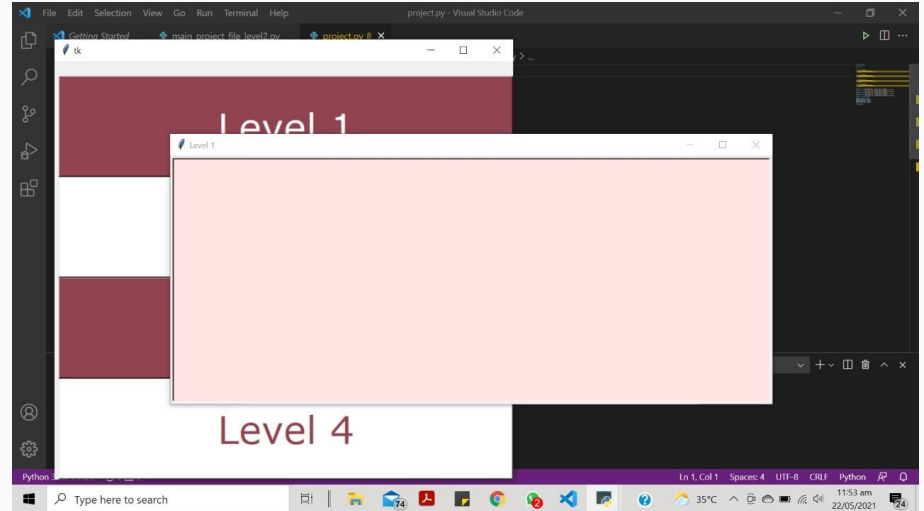
- **Shape size issue**

Challenges Addressed (6)

- **Turtle was created but not moving**

Unaddressed Challenges

- **Issue that when we try to close maze window and click on another level, it wont run unless we close the level window too.**

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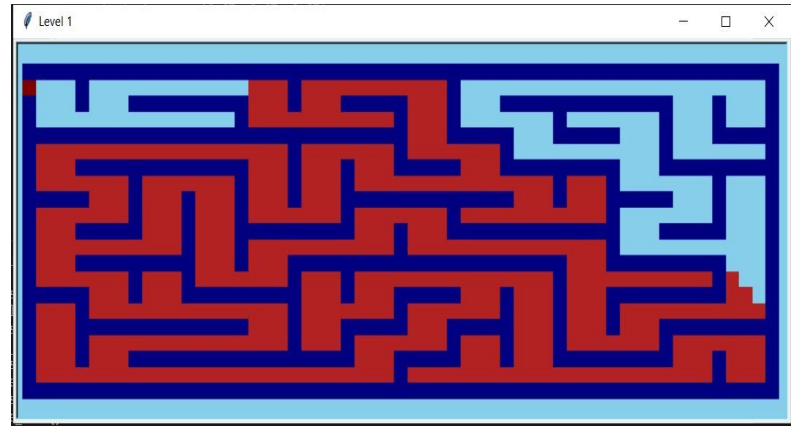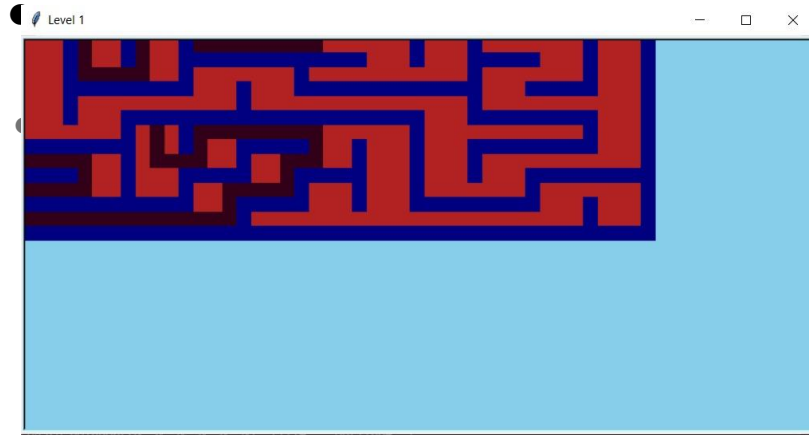
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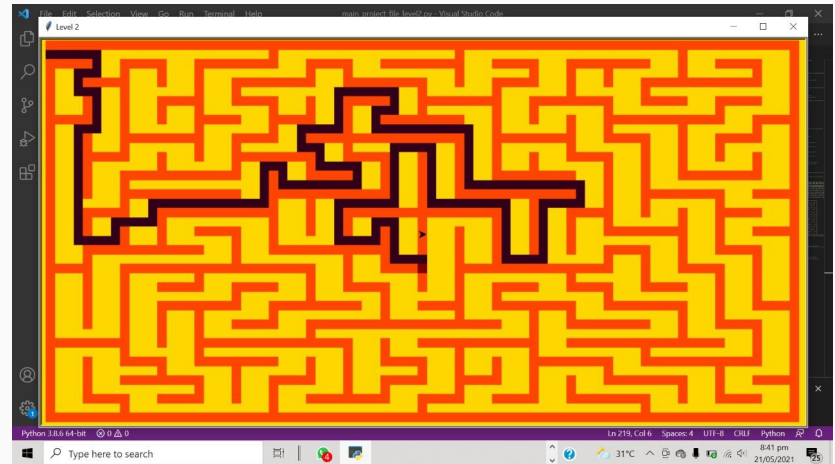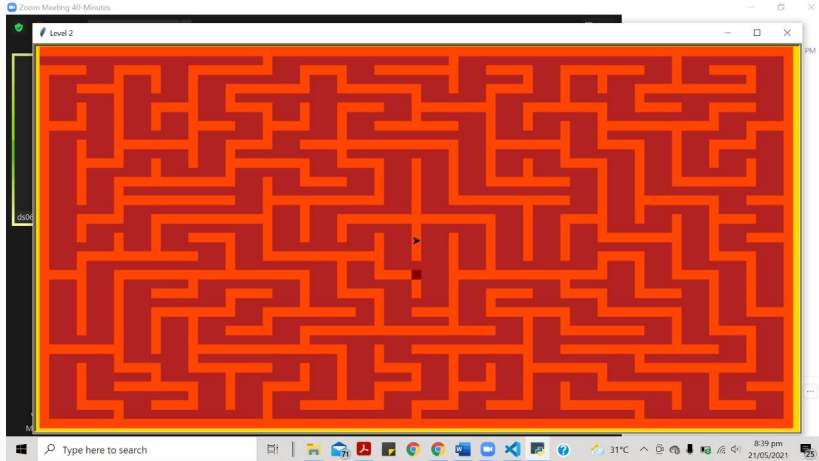- Using data structures like dictionaries, lists, tuples and queues.

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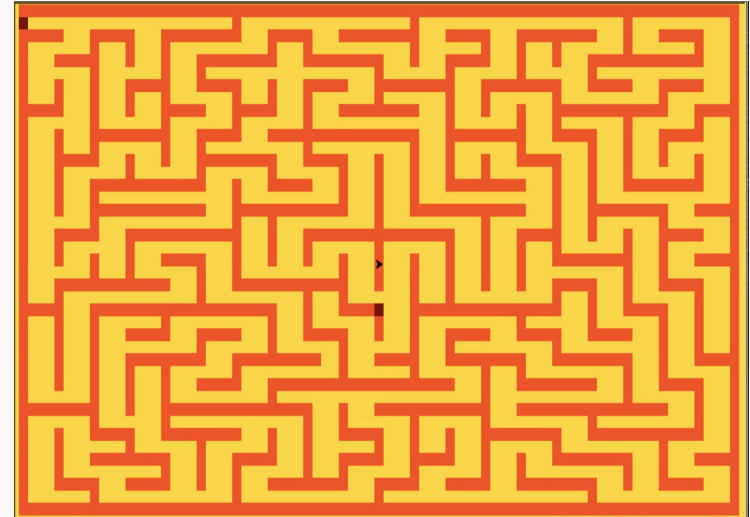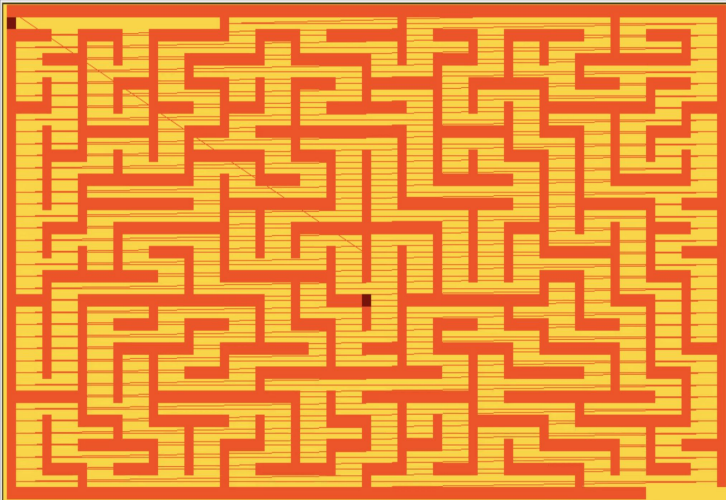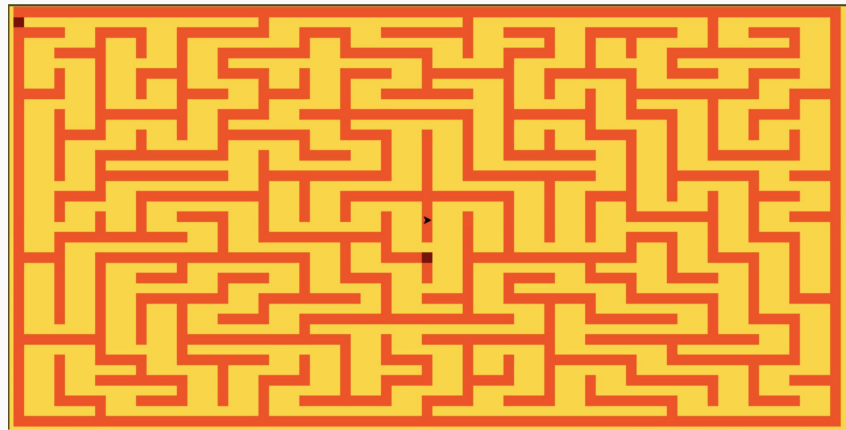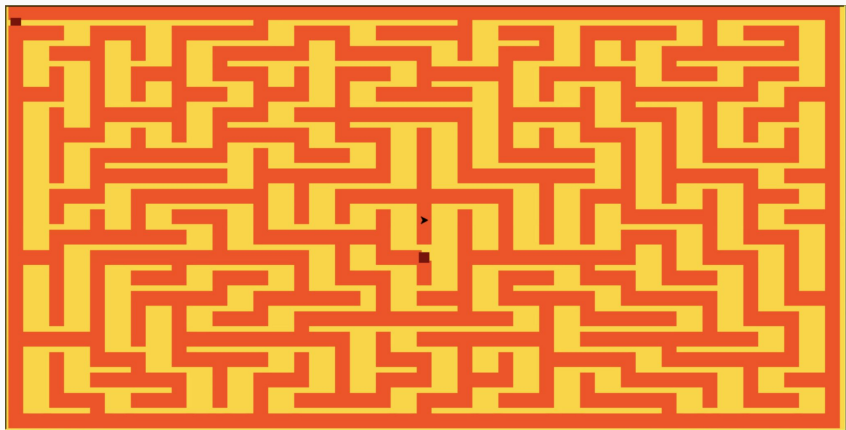
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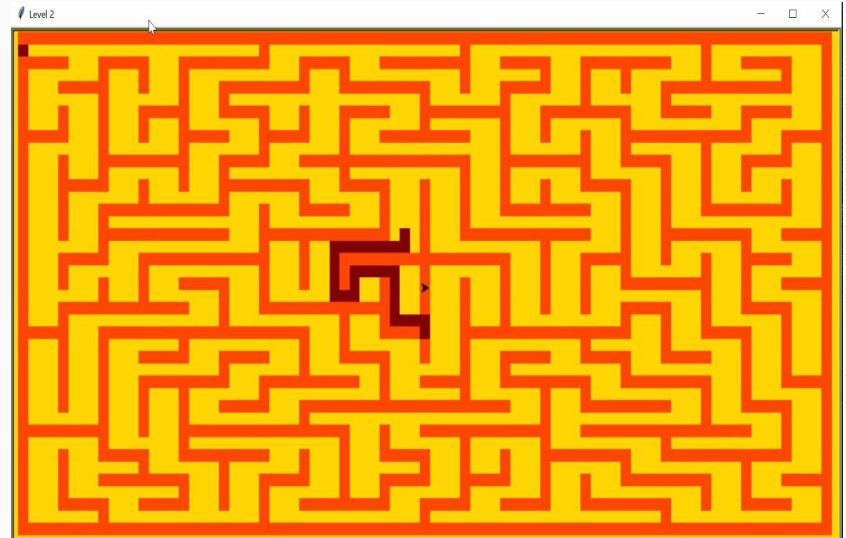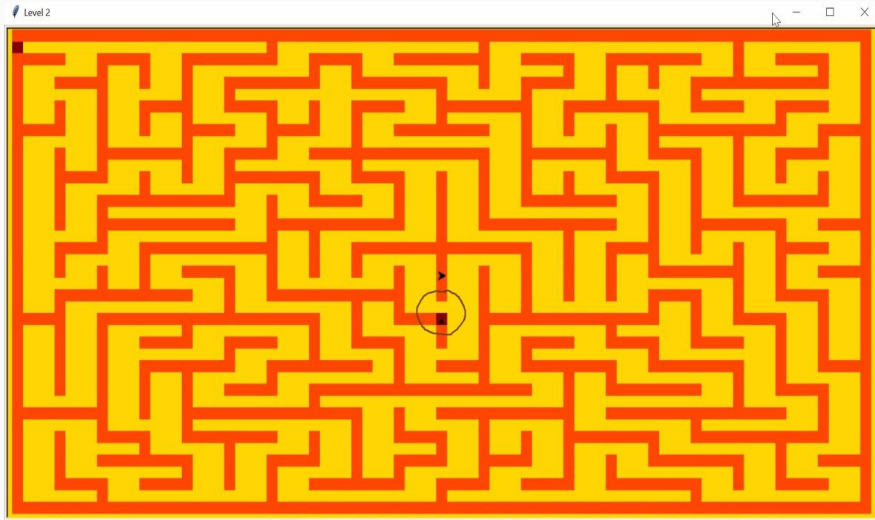
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