Assignment 01: 8 Puzzle problem

CSE-0408 Summer 2021

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***Abstract*—The 8-puzzle problem is a puzzle invented and popularized by Noyes Palmer Chapman in the 1870s. It is played on a 3-by-3 grid with 8 square blocks labeled 1 through 8 and a blank square. Your goal is to rearrange the blocks so that they are in order.**

***Index Terms*—Python**

I. Introduction

The puzzle can be solved by moving the tiles one by one in the single empty space and thus achieving the Goal state.

II. Which techniques are used to 8 puzzle game

The 8-puzzle is a sliding puzzle that consists of a frame of numbered square tiles in random order with one tile missing. The more general n-puzzle is a classical problem which can be solved using graph search techniques.

III. Are puzzles good for your brain?

Puzzles are also good for the brain. Studies have shown that doing jigsaw puzzles can improve cognition and visual-spatial reasoning. The act of putting the pieces of a puzzle together requires concentration and improves short-term memory and problem solving.

IV. Rules of solving puzzle

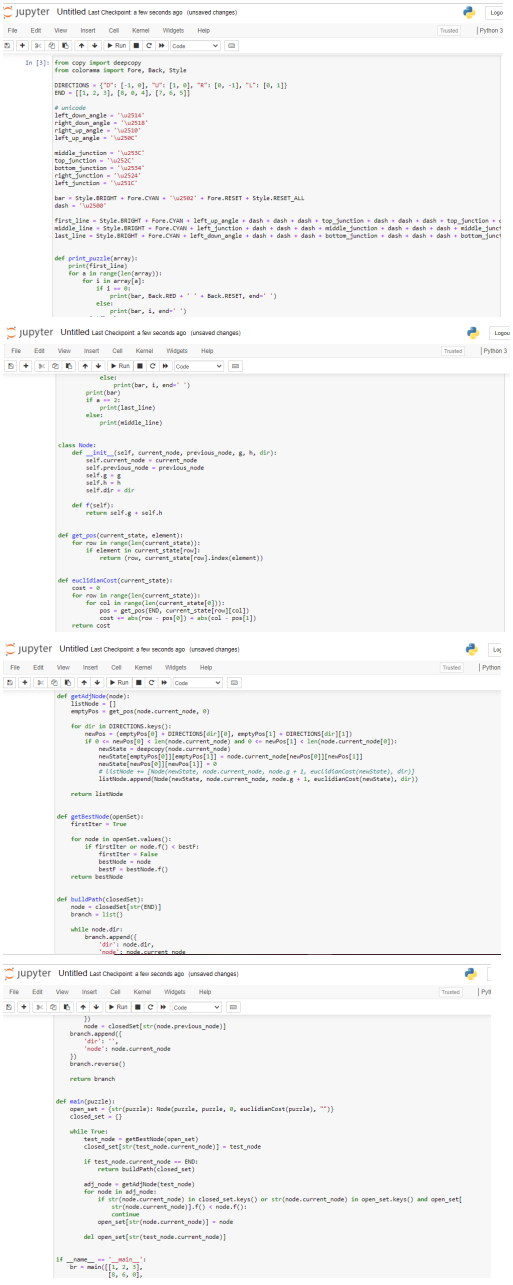
Instead of moving the tiles in the empty space we can visualize moving the empty space in place of the tile.

The empty space can only move in four directions (Movement of empty space)

1. Up
2. Down
3. Right or
4. Left

The empty space cannot move diagonally and can take only one step at a time.

V. Assignmnet Code



VI. Assignment Output

VII. Conclusion

i am testing my code to seeing that how many states it would take to get from the current state to the goal state, i am trying many of moves and that's works .

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