

WELCOME TO

CMPG313

ARTIFICIAL INTELLIGENCE

2020

Topic:

PRACTICAL 3

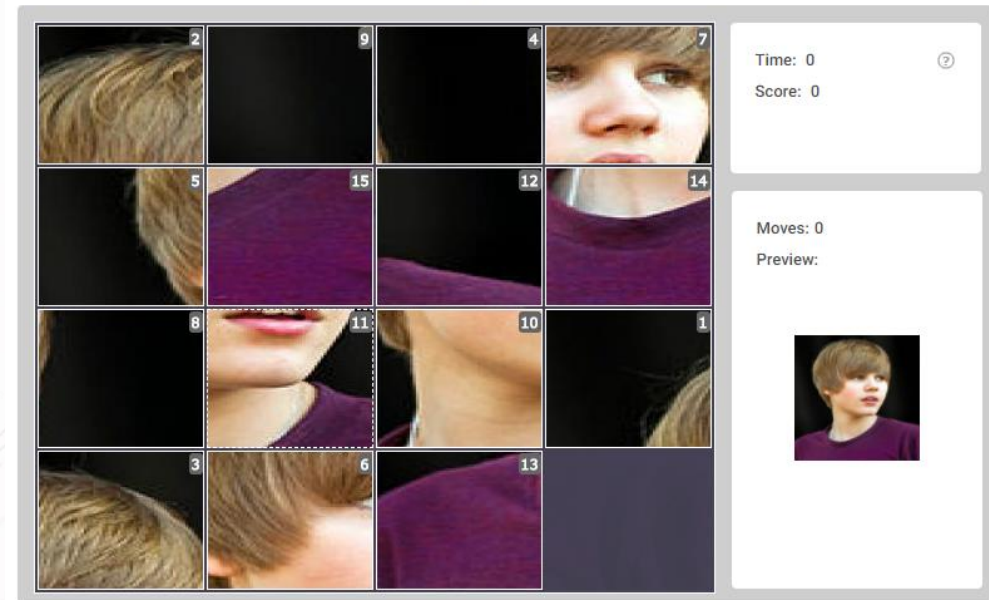
Practical assignment 3

9 WAY PUZZLE

- The 9-puzzle is a sliding puzzle that consists of a frame of numbered square tiles in random order with one tile missing
- Also called the Gem puzzle, Boss puzzle, Mystic square etc.
- If the size is 3×3 tiles, the puzzle is called the 8-puzzle or 9-puzzle, and if 4×4 tiles, the puzzle is called the 15-puzzle or 16-puzzle for the number of tiles or the number of spaces
- The object of the puzzle is to place the tiles in order by making sliding moves that use the empty space

For examples see:

I Love Justin Bieber Sliding Puzzle



<https://www.proprofs.com/games/puzzle/sliding/>

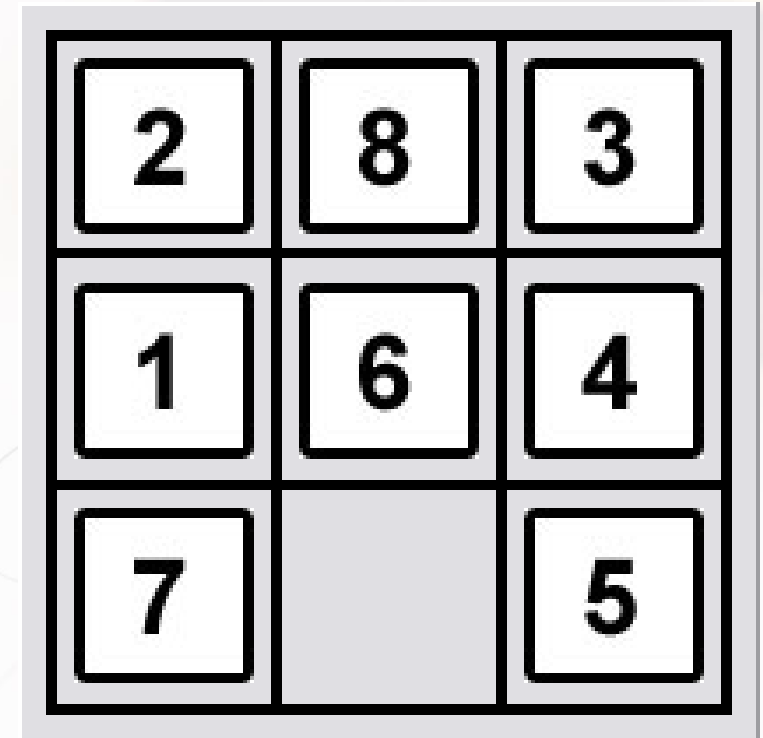
PRACTICAL 3

- Develop a system that implements the 9 puzzle.
- The system should:
 - Have a graphical interface
 - Can be written in Python, C# or Java
 - Needs to read in any board state from a .csv file
- The system should have a graphical interface to allow moves with mouse/touch
- Needs to keep track of the number of moves made (and display it)
- Check for a win condition, but contain no other intelligence

2	8	3
1	6	4
7		5

PRACTICAL 3

- Uploading:
 - Source code, executable and documentation should be uploaded to eFundi Dropbox.
 - Documentation should be:
 - In pdf format
 - Arial, 10pt, 1.5 spacing, justified.
 - Margins 2.5cm left, 2cm top, right and bottom
 - Title page with title, name and student number
 - Table of contents
 - 10 pages long
 - A short introduction, literature study, explanation and screenshots
 - Bibliography in Harvard style



PRACTICAL 3

- DEADLINE

- You have till 10 April 2020 to upload your project
- You must upload everything needed to test and review your project
- You have freedom to use any of the languages, but I would prefer python

