

README

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Steps to compile the program

1. javac Puzzle.java SearchTechniques.java
main function is present in Puzzle.java

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Steps to run the program:-

1. java Puzzle

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INPUT

Program takes the initial state as an input from the console.

It will prompt one question

Enter Initial State as a String :

Final State is assumed to be 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

State is given as an input in the form below where "0" represents the blank tile

For example 1,0,2,4,5,7,3,8,9,6,11,12,13,10,14,15

Sample Input to Console question:-

Enter Initial State as a String : 1,0,2,4,5,7,3,8,9,6,11,12,13,10,14,15

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OUTPUT

It outputs the trace of sequences from the initial state to goal state in the matrix form below for
A* - Heuristic 1, A*-Heuristic 2, IDA*-Heuristic 1 and IDA* - Heuristic 2

Trace of Sequences :

1 0 2 4
5 7 3 8
9 6 11 12
13 10 14 15

1 2 0 4
5 7 3 8
9 6 11 12
13 10 14 15

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1 2 3 4
5 6 7 8
9 10 11 12
13 14 0 15

1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 0

In addition to trace of sequences, Execution Time, Number of Nodes generated and Total Memory used are also displayed on the console for every search technique.