File for the algorithms

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1 Introduction

Algorithm 1 Manhattan Distance

1: **procedure** MANDIST($state$) ▷ The current puzzle configuration
2: $total \leftarrow 0$
3: $puzzleLength \leftarrow sizeOf(state)$
4: $dimensions \leftarrow \sqrt{puzzleLength}$
5: **for** $i \leftarrow 1, puzzleLength$ **do** ▷ Loops through each tile of the puzzle
6: $tileValue \leftarrow state[i]$
7: $expectedRow \leftarrow \frac{(tileValue - 1)}{dimensions}$
8: $expectedCol \leftarrow (tileValue - 1) \bmod dimensions$
9: $rowNum \leftarrow \frac{i}{dimensions}$
10: $rowNum \leftarrow i \bmod dimensions$
11: $total \leftarrow total + \mid expectedRow - rowNum \mid + \mid expectedCol - colNum \mid$
12: **return** $total$ ▷ The heuristic is the total

Algorithm 2 Iterative Deepening A Star

1: **procedure** IDASTAR($state$)
2: $bound \leftarrow currentHeuristic(state)$

Progress report

Description of project: aims, motivation	First	2.1	2.2	3	Fail
Description and understanding of issues and problems addressed in the project	First	2.1	2.2	3	Fail
Achievement so far according to what is reasonably expected for the type of project	First	2.1	2.2	3	Fail
Discussion and justification of changes to project aims, scope, workplan	First	2.1	2.2	3	Fail

Quality of writing

Clarity, structure correctness of writing	First	2.1	2.2	3	Fail

Comments

Supervisor: supervisor

Markers should circle the appropriate level of performance in each section. Report and evaluation sheet should be collected by the student from the supervisor.