



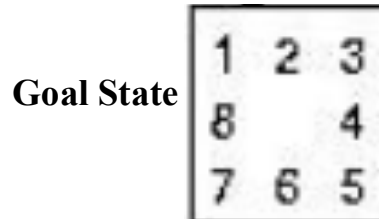
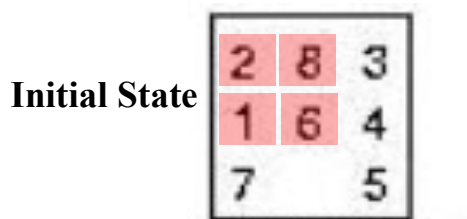
Pharos University in Alexandria
Faculty of Computer Science & Artificial Intelligence

Course	Introduction to AI (AI 102)
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Sheet 6
A* and Best First Search techniques

1. The next figure gives an example showing the BFS tree for the 8-puzzle problem. List the order of the visited nodes by the following search algorithms:

- **Best First Search** using misplaced tiles as a heuristic function.
- **A*** using misplaced tiles as a heuristic function.



2. Given the **Craiova** -> **Hirsova** route finding problem and the heuristics table below, show the list n of visited nodes using the following search techniques:

- **Best First Search** using misplaced tiles as a heuristic function.
- **A*** using misplaced tiles as a heuristic function.

n	H(n)
Arad	366
Bucharest	0
Craiova	160
Dobreta	242
Eforie	161
Fagaras	178
Giurgiu	77
Hirsova	151
Iasi	226
Lugoj	244
Mehadia	241
Neamt	234
Oradea	380
Pitesti	98
Rimnicu Vilcea	193
Sibiu	253
Timisoara	329
Urziceni	80
Vaslui	199
Zerind	374

