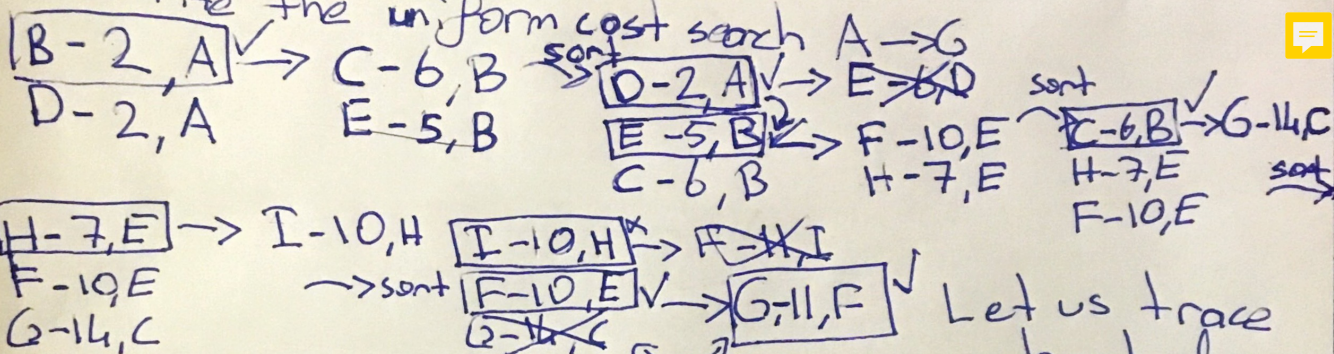


Heuristic distance to G

| | |
|---|----|
| A | 10 |
| B | 5 |
| C | 2 |
| D | 3 |
| E | 2 |
| F | 1 |
| H | 5 |
| I | 2 |

A) Write the uniform cost search A → G



Let us trace back from G.
 $G \rightarrow F \rightarrow E \rightarrow B \rightarrow A$ therefore solution for A → G

A → B → E → F → G [cost 11] visited nodes in order

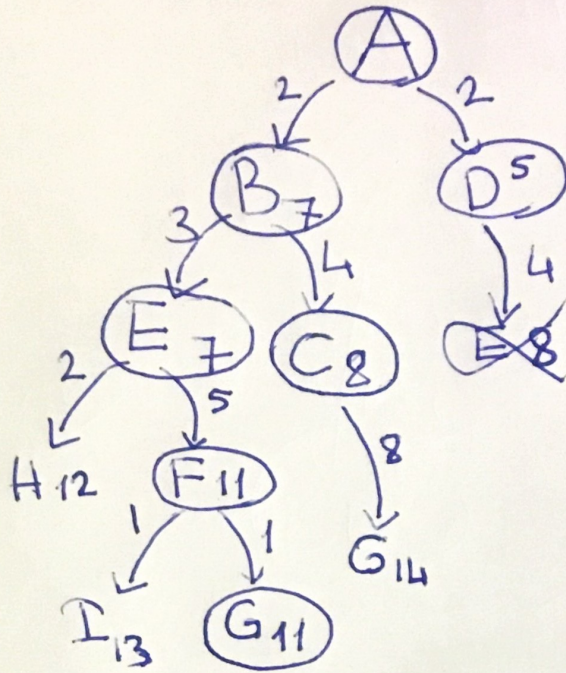
B) Write the greedy search A → G

A → ~~B~~ → ~~D~~ → ~~E~~ → ~~F~~ → ~~G~~

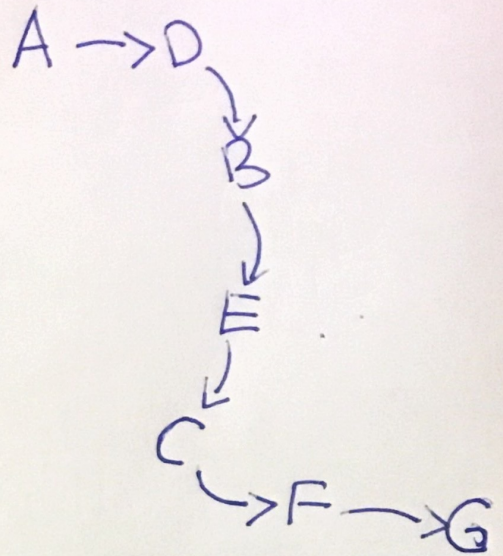
A → D → E → F → G

A → D → E → F → G [cost 12]

C) Write A* search visited nodes A → G



Visited Nodes



$$X \xrightarrow{g(n)} Y \quad \left| \begin{array}{l} \text{Heuristic} \\ \text{Table} \\ Y \rightarrow h(n) \end{array} \right.$$

$$A^*[f(n) = g(n) + h(n)]$$

$$\underline{A \rightarrow G}$$

$$A \rightarrow B \rightarrow E \rightarrow F \rightarrow G$$

$$\boxed{\text{cost} = 11}$$

Mehdi
hasprizi