

Best First Search

① Initial State

-	A	C
H	B	D
G	F	E

Goal State

A	B	C
H	-	D
G	F	E

Right

~~Left~~ Down

Down

A	-	C
H	B	D
G	F	E

H	A	C
-	B	D
G	F	E

$$f(n) = 1$$

$$f(n) = 3$$



Down

A	B	C
H	-	D
G	F	E

$$f(n) = 0$$

Goal

* Best first Search
* 8 Puzzle Problem

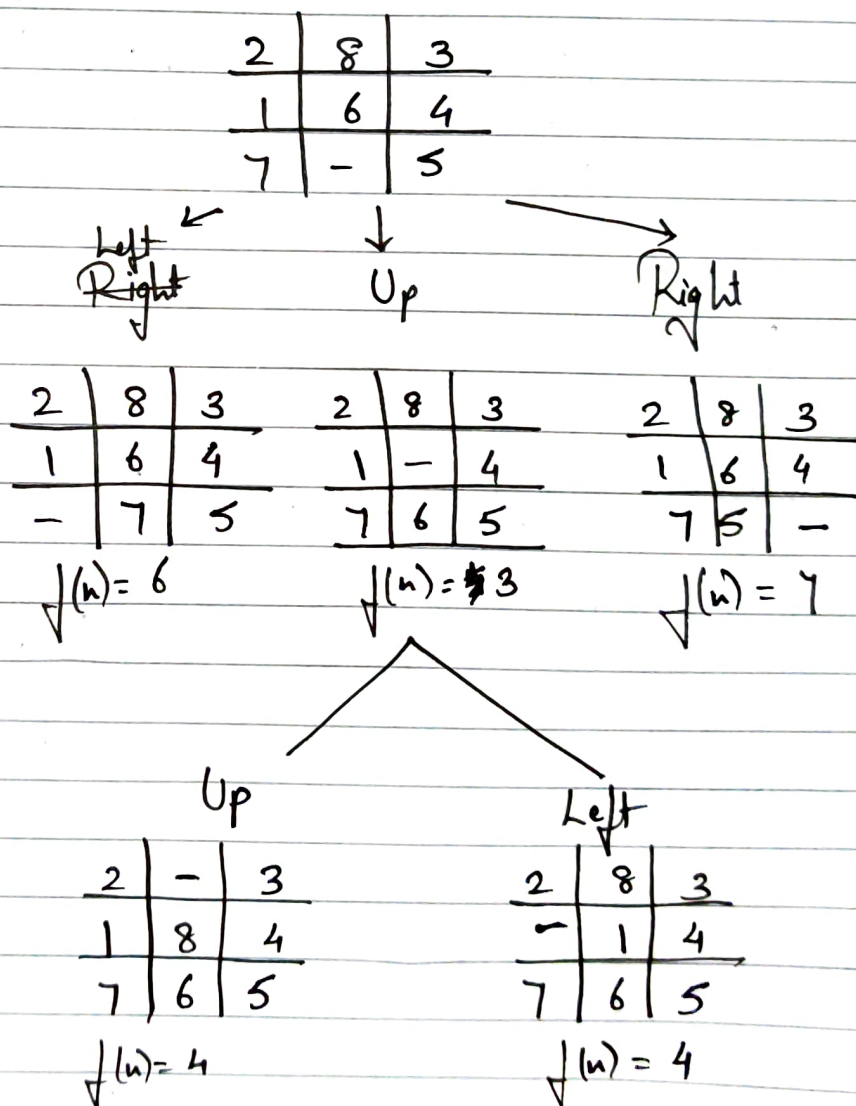
Initial State

2	8	3
1	6	4
7	-	5

Goal State

1	2	3
8	-	4
7	6	5

Solution:



$$\begin{array}{|c|c|c|}
 \hline
 2 & - & 3 \\
 \hline
 1 & 8 & 4 \\
 \hline
 7 & 6 & 5 \\
 \hline
 \end{array}$$

Left

$$\begin{array}{|c|c|c|}
 \hline
 - & 2 & 3 \\
 \hline
 1 & 8 & 4 \\
 \hline
 7 & 6 & 5 \\
 \hline
 \end{array}$$

$$f(n) = 3$$

Right

$$\begin{array}{|c|c|c|}
 \hline
 2 & 3 & - \\
 \hline
 1 & 8 & 4 \\
 \hline
 7 & 6 & 5 \\
 \hline
 \end{array}$$

$$f(n) = 5$$

Down

$$\begin{array}{|c|c|c|}
 \hline
 1 & 2 & 3 \\
 \hline
 - & 8 & 4 \\
 \hline
 7 & 6 & 5 \\
 \hline
 \end{array}$$

$$f(n) = 2$$



$$\begin{array}{|c|c|c|}
 \hline
 1 & 2 & 3 \\
 \hline
 8 & - & 4 \\
 \hline
 7 & 6 & 5 \\
 \hline
 \end{array}$$

$$f(n) = 0$$

Goal State.