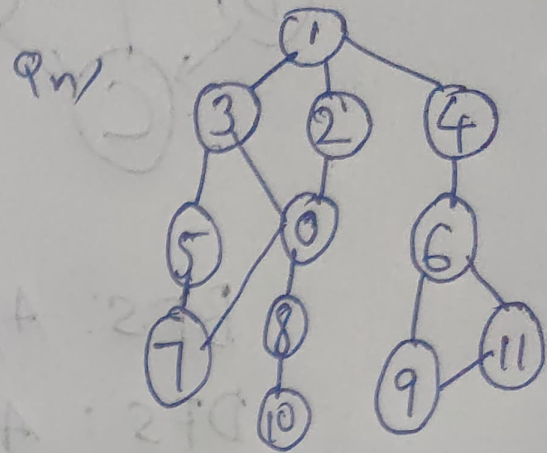
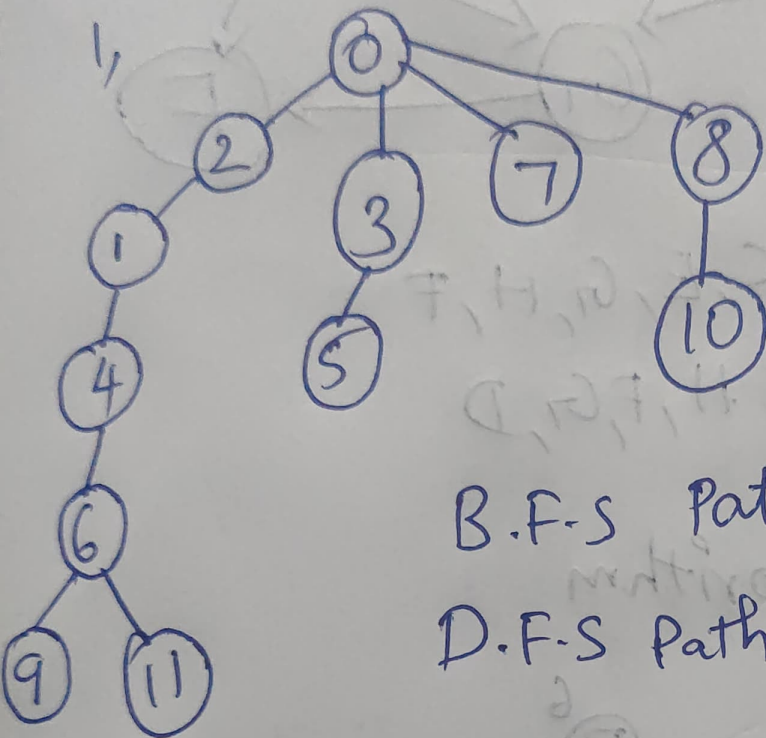


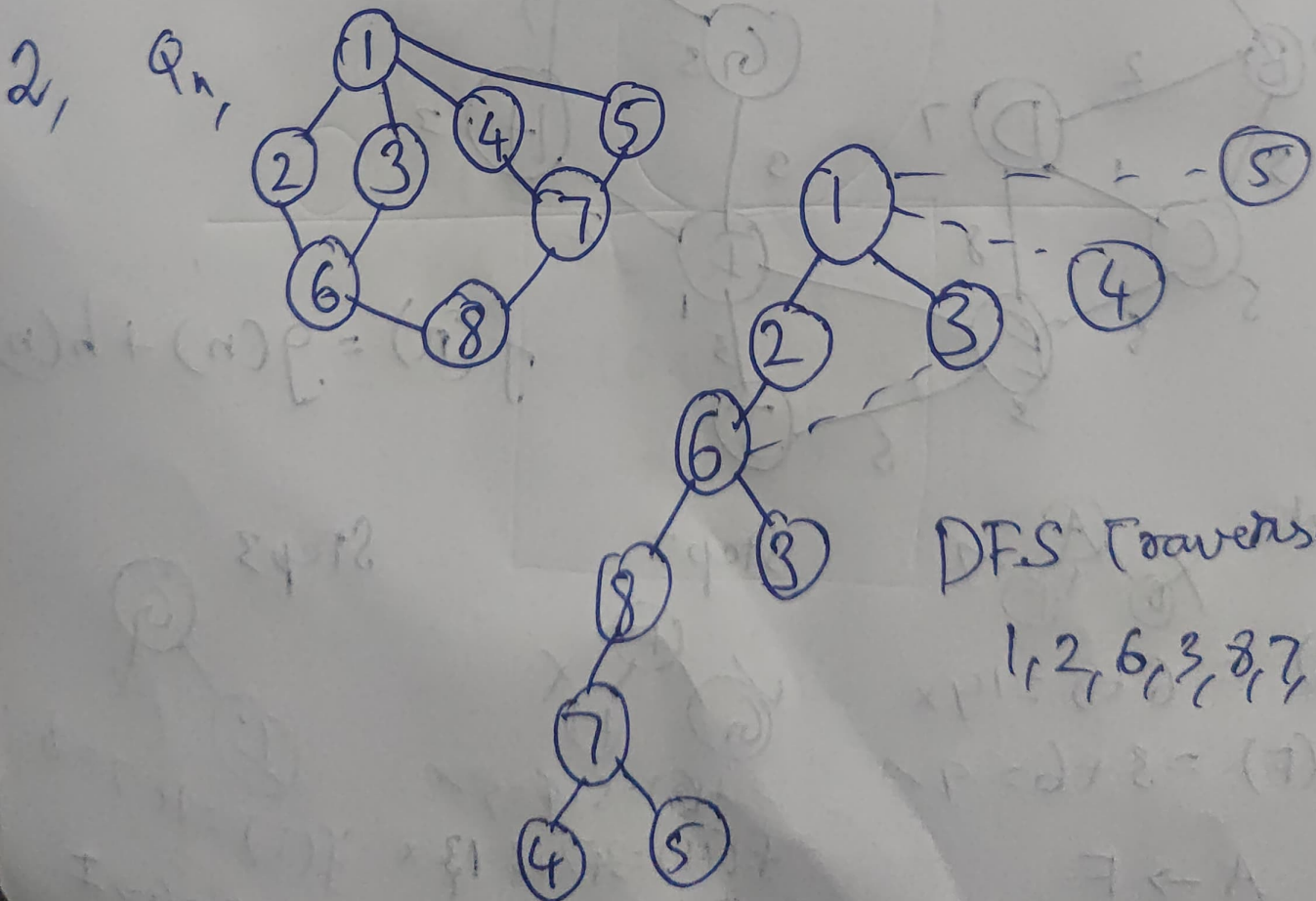
AI KNN Assignment

Praneesh R.V
CB.SC.W4CYS23036



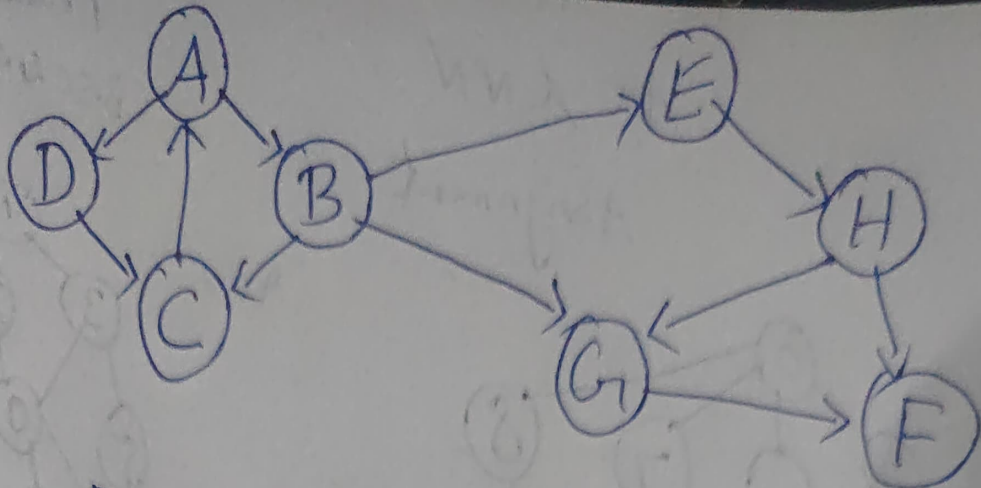
B.F.S Path : 0, 2, 1, 4, 6, 11

D.F.S Path : 0, 2, 1, 4, 6, 9, 11



DFS Traversal

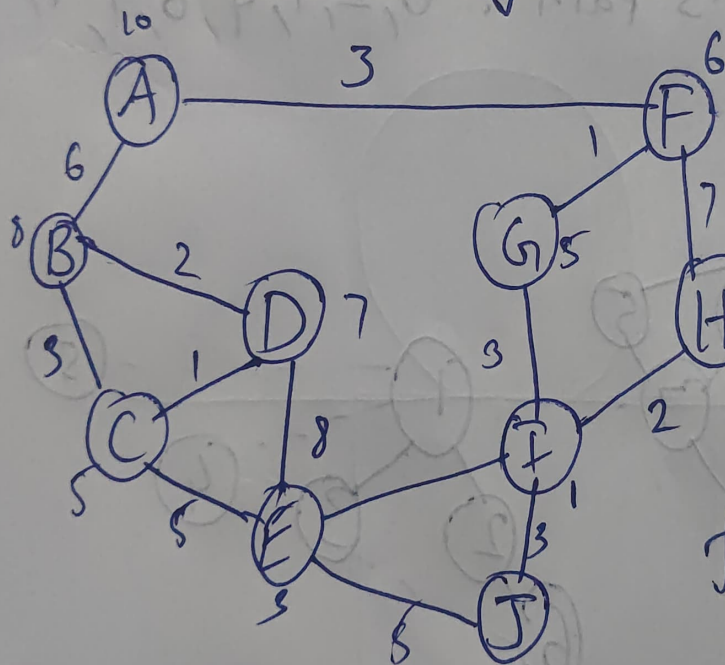
1, 2, 6, 3, 8, 7, 4, 5



BFS: A, B, D, C, E, G, H, F

DFS: A, B, C, E, H, F, G, D

4, A* search Algorithm



$$f(n) = g(n) + h(n)$$

Step 1,

$$f(B) = 6 + 8 = 14 \times$$

$$f(F) = 3 + 6 = 9 \checkmark$$

A → F

Step 2

$$f(G) = 5 + 4 = 9 \checkmark$$

$$f(H) = 3 + 7 + 3 = 13 \times$$

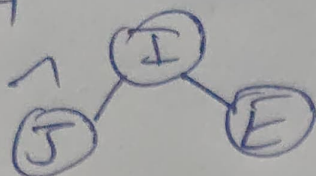
A → F → G

Step 3

$$f(I) = 1 + 7 = 8$$

A → F → G → I

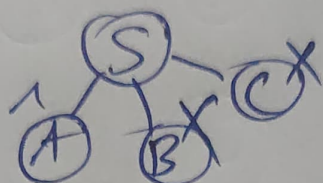
Step 4



$A \rightarrow F \rightarrow G \rightarrow I \rightarrow J$

⑤

Step 1.



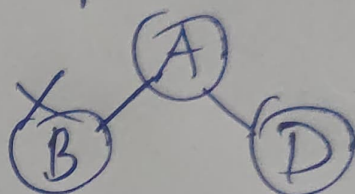
$$f(A) = 12 \checkmark$$

$$f(B) = 16 \times$$

$$f(C) = 16 \times$$

$$S \rightarrow A$$

Step 2

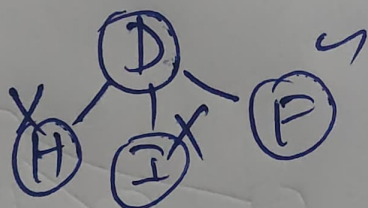


$$f(B) = 14 + 4 = 18$$

$$f(D) = 10 + 4 = 14$$

$$S \rightarrow A \rightarrow D$$

Step: 3



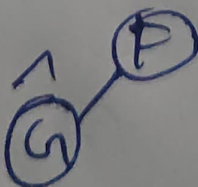
$$f(H) = 7 + 25 = 32 \times$$

$$f(I) = 4 + 29 = 33 \times$$

$$f(F) = 10 + 3 = 13 \checkmark$$

$$S \rightarrow A \rightarrow D \rightarrow F$$

Step 4



$S \rightarrow A \rightarrow D \rightarrow F \rightarrow G$