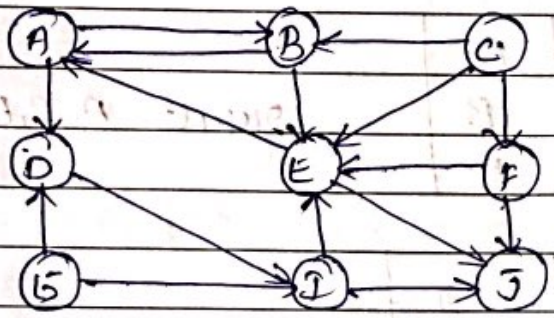
CHIRANJEEVI
1BM19CS403

Assignment - 2

For the given below 2 Graphs, show the DFS as well are BFS travellers. show the stack and queue contents obtaining during traversal. Also show the output Graphs

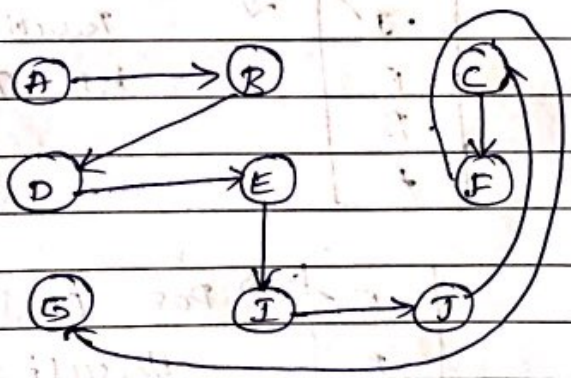


BFS:

Queue

A	B	D	E	I	J	C	F	G

Output Graph



DFS

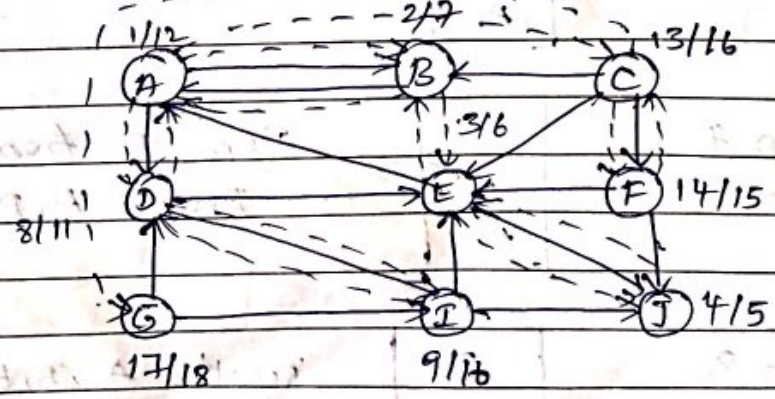


Fig Graph output representation

Step1 : A — Result A

Step2 : B, A — Result A,B

Step 3 : E, B, A — Result A, B, E

Step 4 : J, E, B, A — Result A, B, E, J

Step5 : Pop J from Stack — J, E, B, A — Result A,B,E,J

Step6 : Pop E from Stack — E, B, A — Result A,B,E,J

Step 7 : Pop B from Stack — B, A — Result A,B,E,J

Step 8 — D, A — Result A, B, E, J, D

Step 9 :

I
D
A

Result A ; B, E, J, D, I

Step 10 :

I
D
A

Pop I from Stack
Result A, B, E, J, D, I

Step 11 :

D
A

Pop D from Stack
Result A, B, E, J, D, I

Step 12 : | A | Pop A stack is Empty
Result A, B, E, J, D, I

Step 13 :

F
C

Result : A, B, E, J, D, I, C, F

Step 14 :

F
C

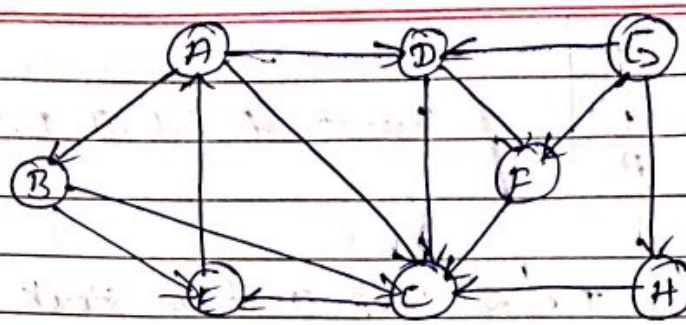
Pop F from Stack
Result : A, B, E, J, D, I, C, F

Step 15 : | C | Pop C from Stack
Result : A, B, E, J, D, I, C, F

Step 16 : | G | Results : A, B, E, J, D, I, C, F, G

Step 17 : | G | Pop G from Stack is Empty

(2)

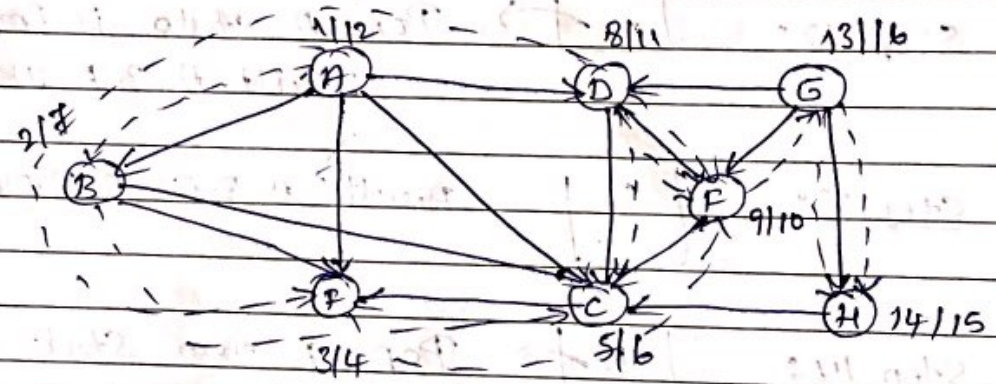


BFS

Queue

A	B	C	D	E	F	G	H

Output Graph representation



Step1 :

E
B
A

Result A, B, E

Step2 :

E
B
A

Pop E from stack

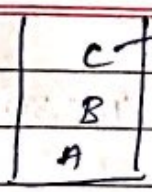
Result A, B, E

Step3 :

C
B
A

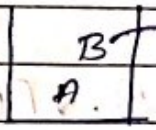
Result A, B, E, C

Step 4 :



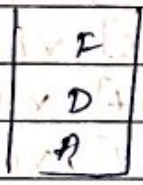
Pop C from Stack
Result : A, B, E, C

Step 5 :



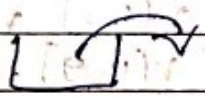
Pop B from Stack
Result : A, B, E, C

Step 6 :



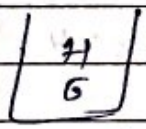
Result : A, B, E, C, D, F

step 7 :



Pop F, D, A from Stack is Empty
Result : A, B, E, C, D, F,

Step 8 :



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

Step 9 :

Pop H & G from Stack is Empty
Result : A, B, E, C, D, F, G, H.