

ADA

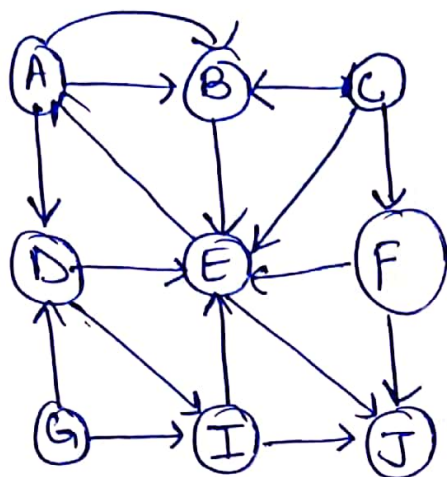
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4-c

IBM18CS117

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(i) DFS :

starting vertex : A

Stack \rightarrow A 1, 6 \downarrow

B 2, 3

E 3, 2

J 4, 1

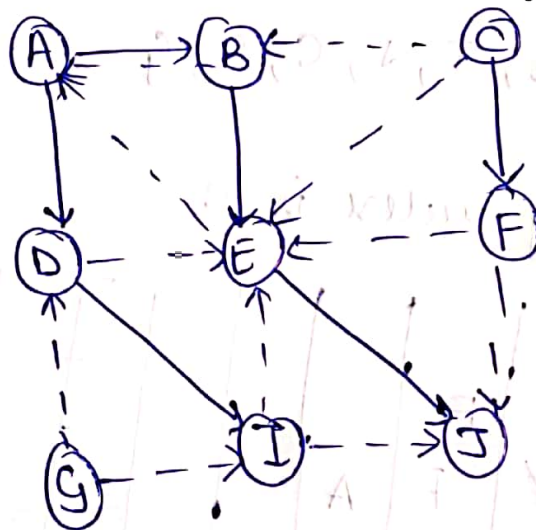
D 5, 5

I 6, 4

C 7, 8

F 8, 7

G 9, 9



DFS: A \rightarrow B \rightarrow E \rightarrow J,

A \rightarrow D \rightarrow I,

C \rightarrow F

G

DFS: A, B, E, J, D, I, C, F, G

(ii) BFS :

Starting vertex : A

Queue :

A						
B	D					
	D	E				
		E	I			
		I	J			
			J			
				C		
				F		
					G	

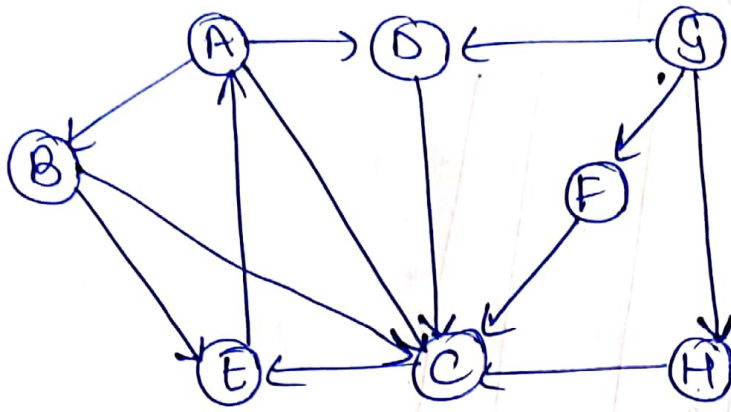
A, B, D, E, I, J, C, F, G

If starting vertex is C

C							
B	E	F					
	E	F	A				
		F	A	J			
			A	J			
				J	D		
					D	I	
						I	
							G

BFS → C, B, E, F, A, J, D, I, G.

Q



(i) DFS: Starting vertex: G

G 1, 8

H 2, 6

C 3, 5

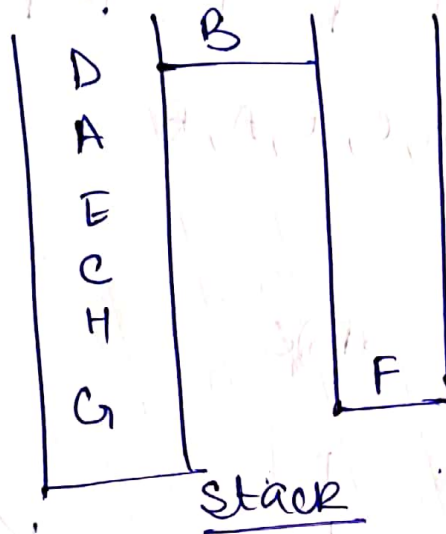
E 4, 4

A 5, 3

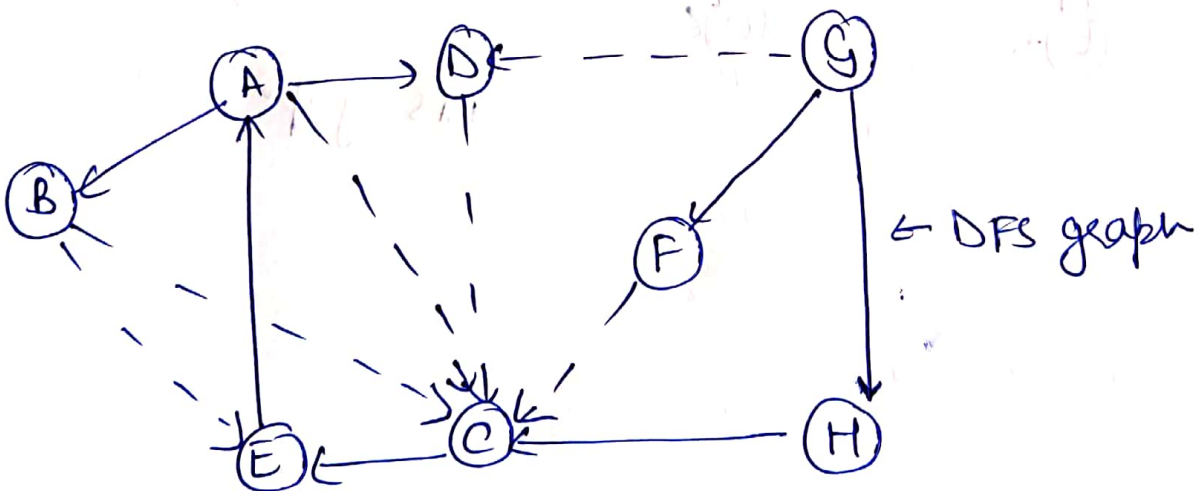
D 6, 1

B 7, 2

F 8, 7



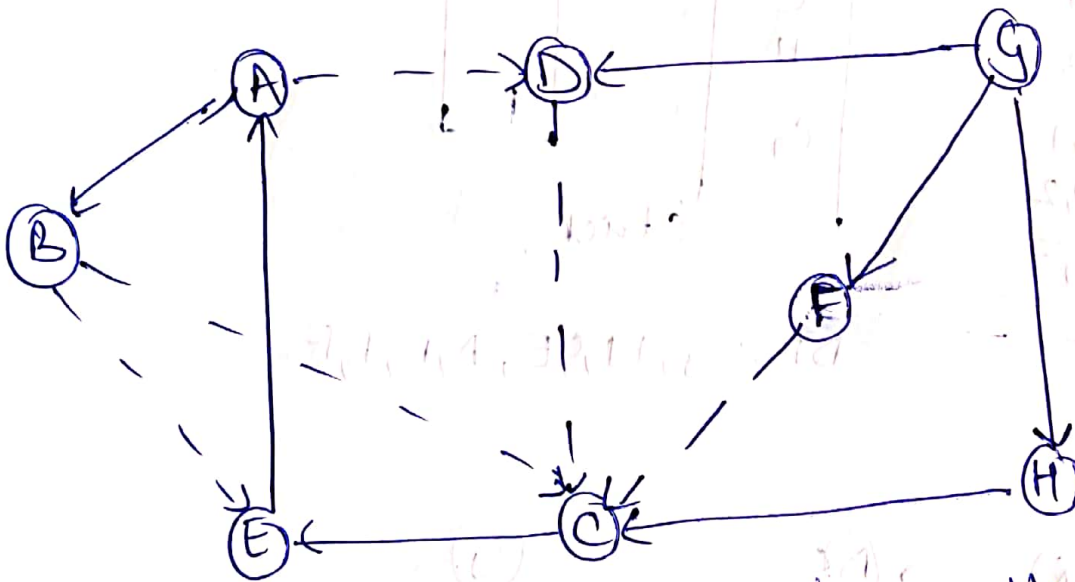
DFS: G, H, C, E, A, D, B, F



(ii) BFS: Starting node: G

A									
	H	F	D						
		F	D	C					
			D	C					
				C					
					E				
						A			
							B		

BFS → G, H, F, D, C, E, A, B



BFS graph