BFS (Breadth First Search)

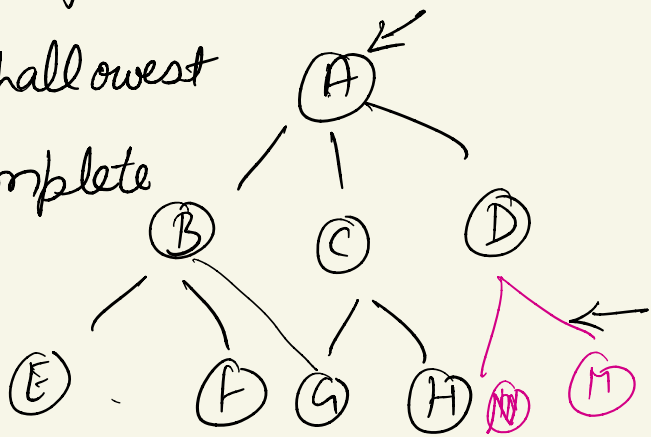
① Uniformed

② Shallowest

③ Complete

Level by level

FIFO



A

B C D

C D E F

D E F G H

E F G H

F G H

G H

H

I

J

A B C D E F G H I J

BFS

A C G

18

$O(b^d)$

Branch factor

$b = 3^2$

$= 9$

DFS (Depth first Search)

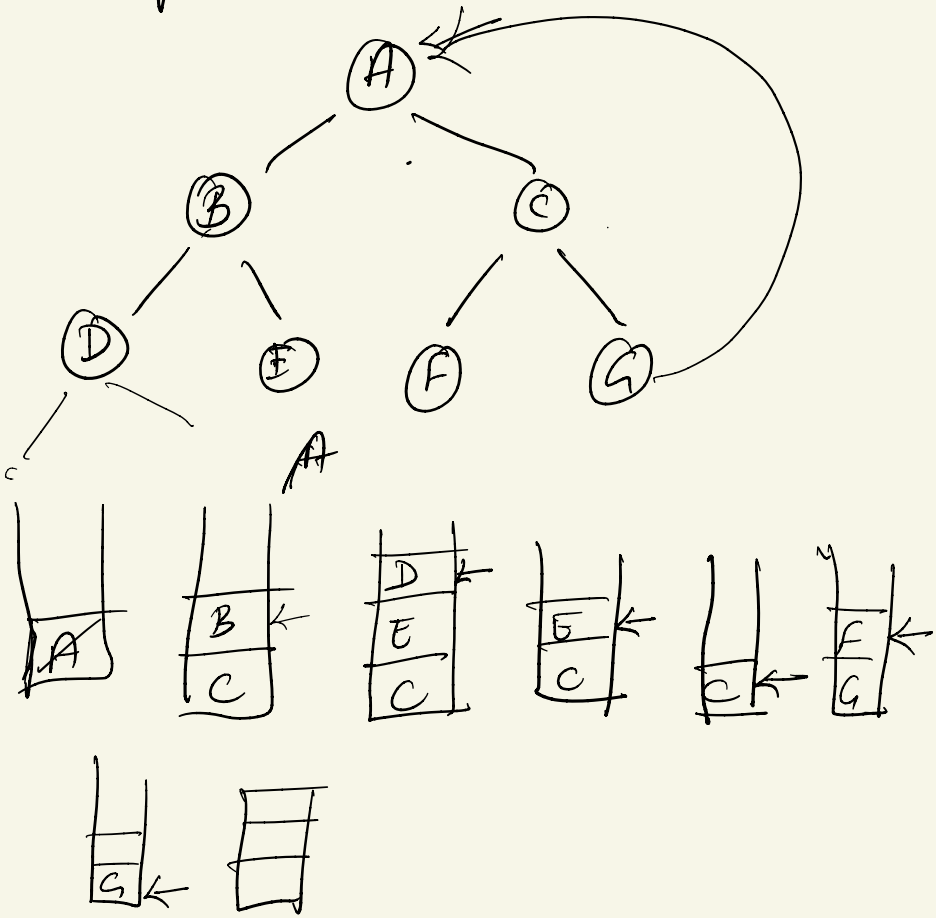
Uniformed

Stack LIFO

A B D E C F G

Deepest Node

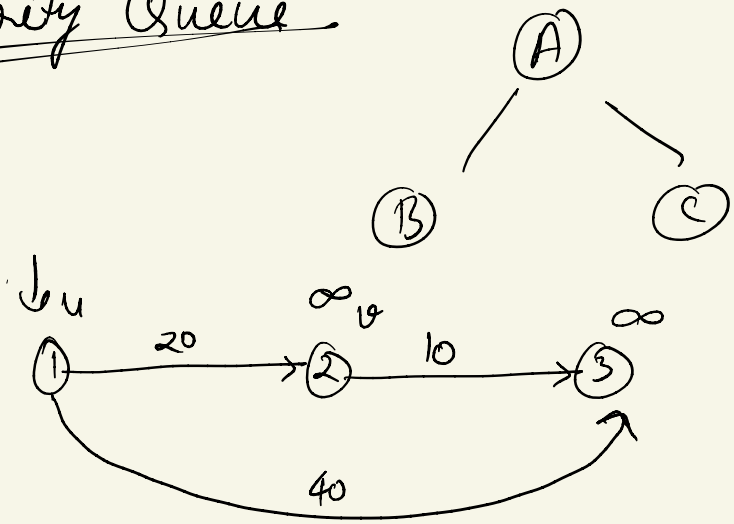
Incomplete



UCS (Uniformed Cost search)

Dijkastra's Algo

Priority Queue



Node ① Source Node = 0

→ d(u) c(u, v)

d(v)

if (d(u) + c(u, v) < d(v)

d(v) = d(u) + c(u, v)

d(v) = d(u) + c(u, v)

= 0 + 20 < ∞

d(v) = 20

Source	Destination				
1	2	3	4	5	6
0	∞	∞	∞	∞	∞
1	7	9	∞	∞	14
1, 2	(7)	9	22	∞	14
1, 2, 3	7	9	20	∞	11
1, 2, 3, 6	7	9	20	20	11
1, 2, 3, 6, 4	7	9	20	20	11
1, 2, 3, 6, 4, 5