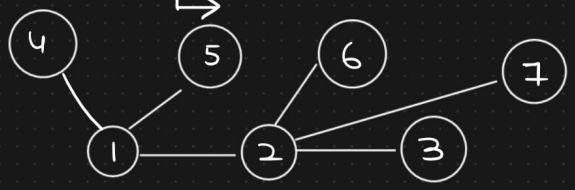
Breadth first Traversal



1 2 4 5 3 6 7

FIFO (first In first Out)

Queue

Psuedocode — No Recursion

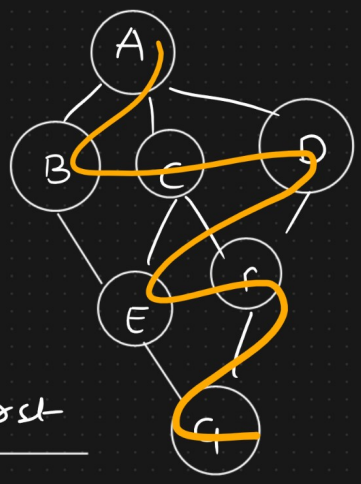
```
BFT(v):
    visited(v) = 1
    add(v, Q)
    while Q:                    ← Not empty
        x = delete(Q)
        print(x)
        for all ω adj to x:     ← 2E
            if ω — not visited:
                add(ω, Q)
```

Q - Queue

Time complexity → $O(V+E)$

Graph

A B C D E F G



Breadth first

Traversal

↳ Level order

traversal

BFT(A)

A

ω = BCD

B C D

ω = AE

E f

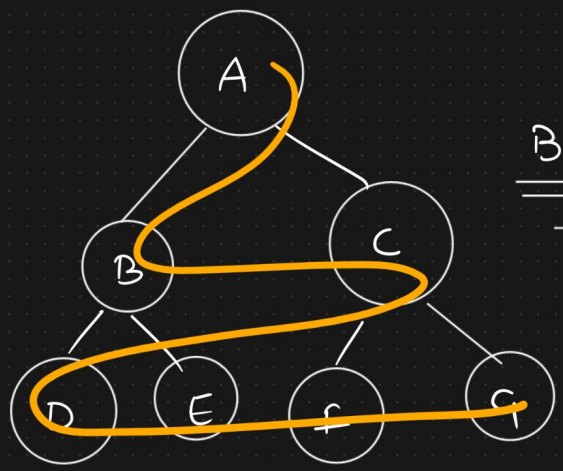
Ef

ω = Df

ω = BCG

F G

ω = CDG



BFT

A B C D E F G

Level Order

Traversal