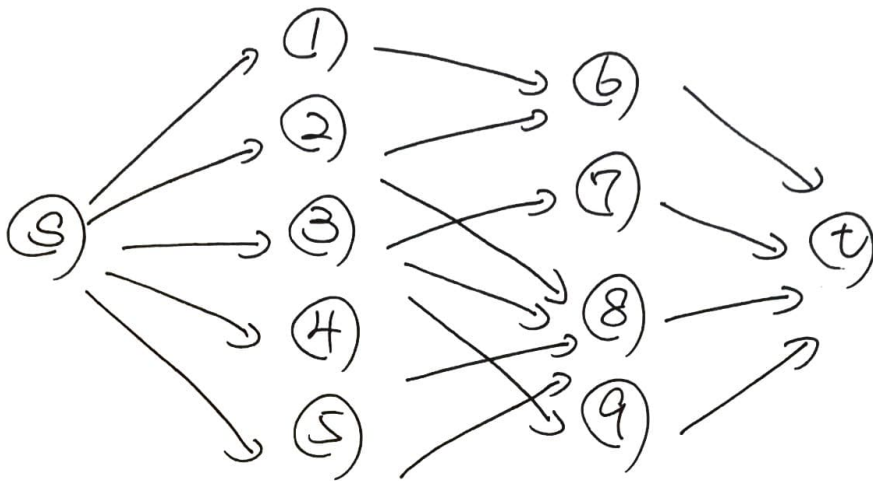
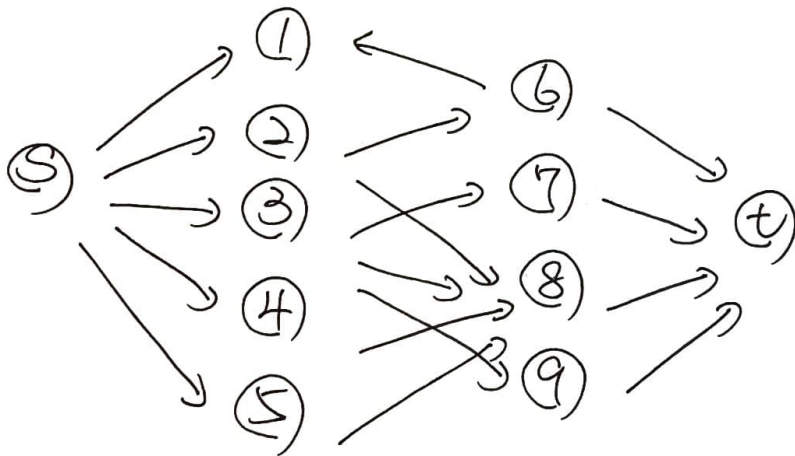


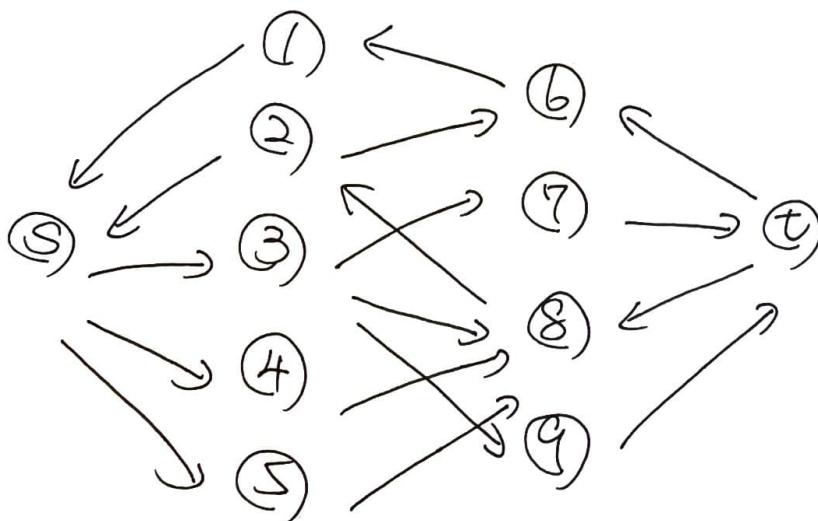
Initial Network :



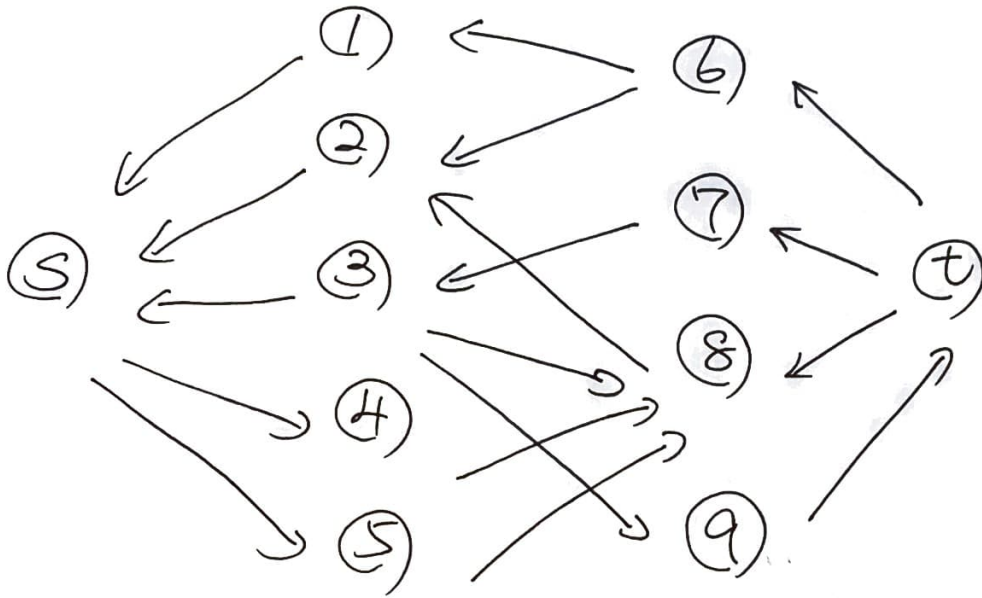
Augmenting Path :  $s \rightarrow 1 \rightarrow 6 \rightarrow t$



Augmenting Path :  $s \rightarrow 2 \rightarrow 8 \rightarrow t$



Augmenting Path :  $s \rightarrow 3 \rightarrow 7 \rightarrow t$



\*

## MaxFlow Practice :

Augmenting Path 1 : Source 'S' and Sink 'T'

$$S - 10 \rightarrow A - 5 \rightarrow B - 7 \rightarrow T$$

Flow = min of all capacities of the selected channel

$$\text{Flow} = \min(10, 5, 7) = 5$$

$$S - 5/10 \rightarrow A - 0/5 \rightarrow B - 2/7 \rightarrow T$$

$\Rightarrow$  Flow between vertices A and B has become

0 and then path between A and B has blocked

$$\Rightarrow \underline{\text{Flow} = 5} \quad *$$

Augmenting Path 2 :

$$S - 8 \rightarrow C - 10 \rightarrow D - 10 \rightarrow T$$

$$\text{Flow} = \min(8, 10, 10) = 8$$

$$S - 0/8 \rightarrow C - 2/10 \rightarrow D - 2/10 \rightarrow T$$

$\Rightarrow$  Flow between vertices S and C has become

0 and then path between S and C has blocked

$$\Rightarrow \underline{\text{Flow} = 8} \quad *$$

### Augmenting Path 3:

$$S - 5/10 \rightarrow A - 2 \rightarrow C - 2/10 \rightarrow D - 2/10 \rightarrow T$$

$$\text{Flow} = \min(10, 2, 10, 10) = 2$$

$$S - 3/10 \rightarrow A - 0/2 \rightarrow C - 8/10 \rightarrow D - 8/10 \rightarrow T$$

$\Rightarrow$  Flow between vertices A and C become 0

and then path between A and C are blocked

$$\Rightarrow \underline{\text{Flow} = 2}$$

\*