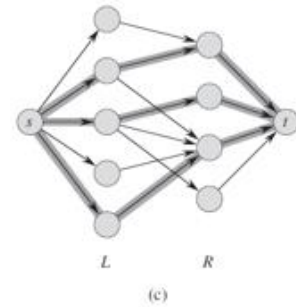
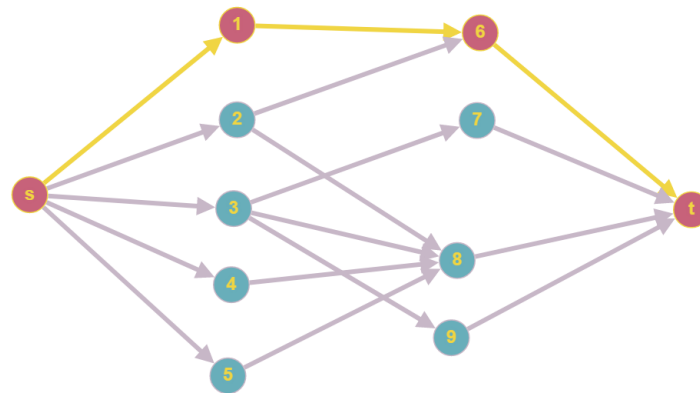


**26.3-1**

Run the Ford-Fulkerson algorithm on the flow network in Figure 26.8(c) and show the residual network after each flow augmentation. Number the vertices in  $L$  top to bottom from 1 to 5 and in  $R$  top to bottom from 6 to 9. For each iteration, pick the augmenting path that is lexicographically smallest.

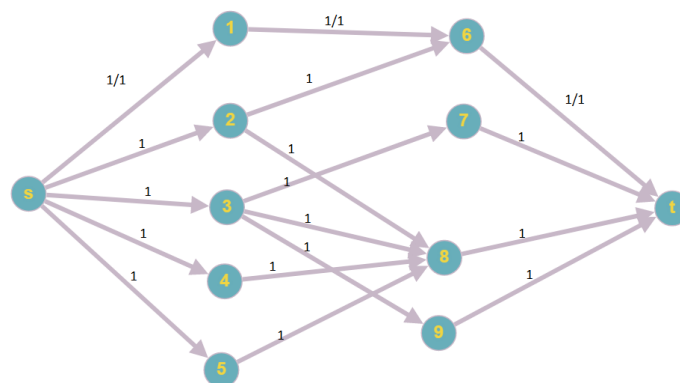


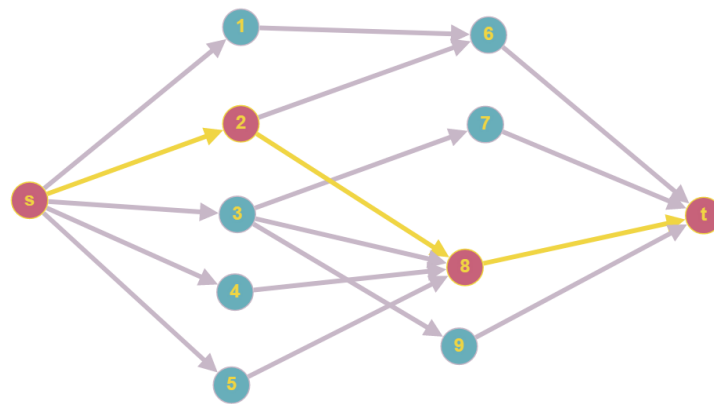
Assuming same weight for every edge (1):



Augmenting Path:  $s, 1, 6, t$

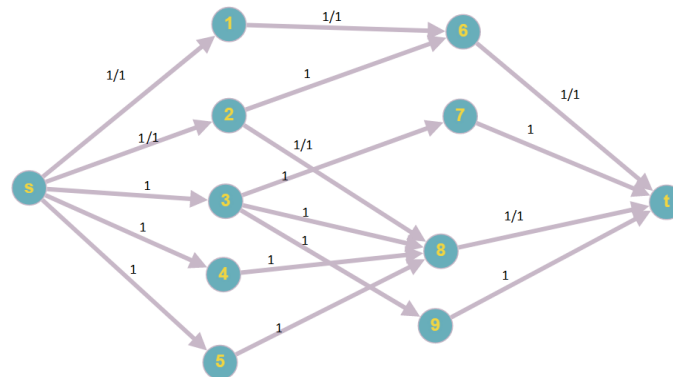
Residual Graph

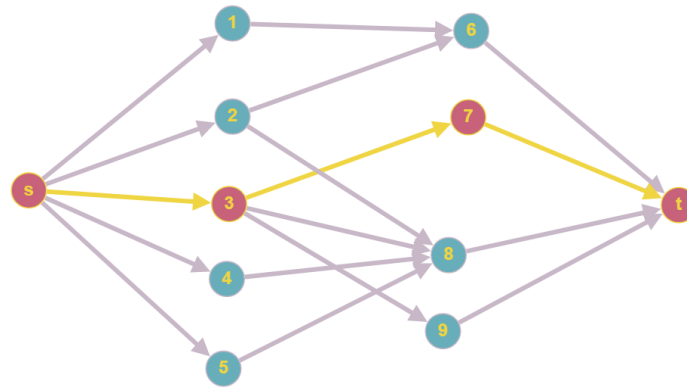




Augmenting Path:  $s, 2, 8, t$

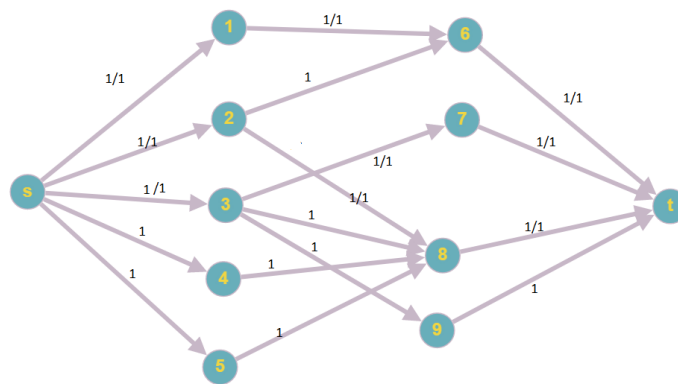
Residual Graph





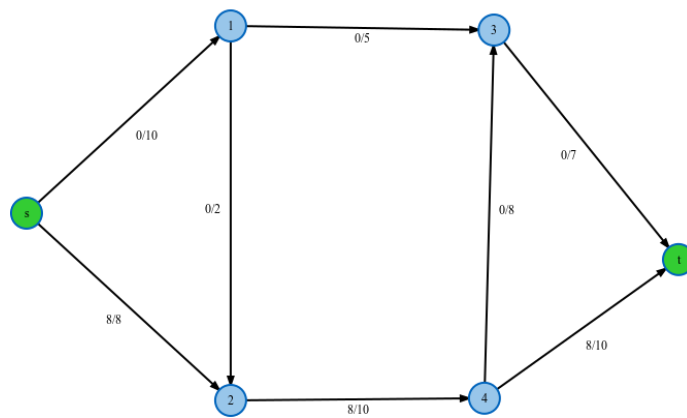
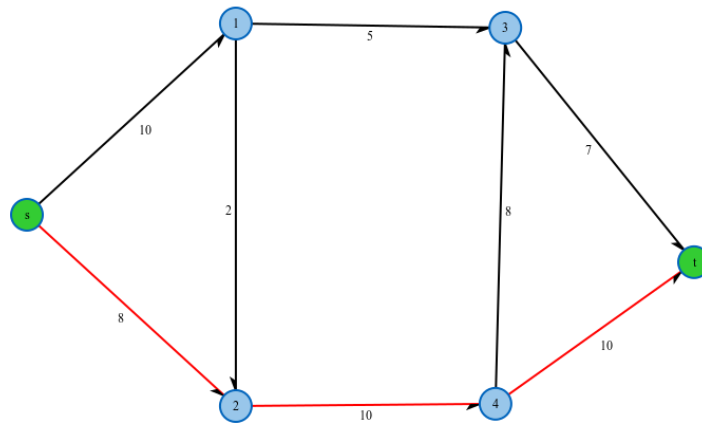
Augmenting Path:  $s, 3, 7, t$

Residual Graph

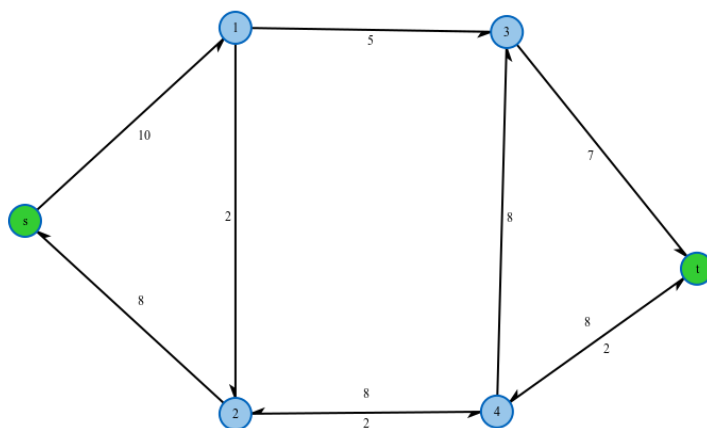


Run the Ford-Fulkerson algorithm on the flow network in the following figure and show the residual network after each flow augmentation.

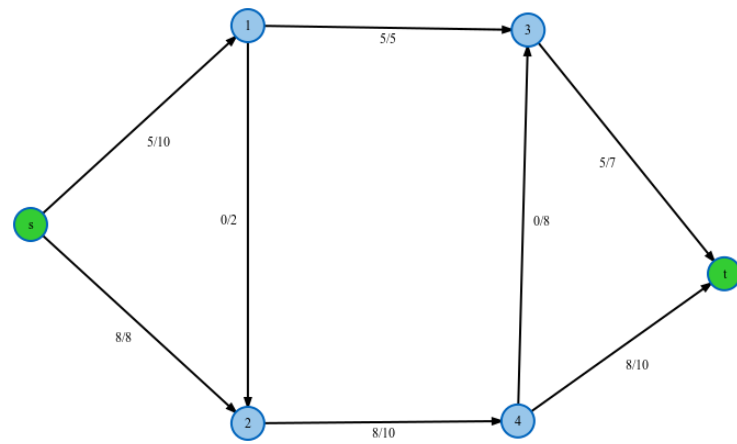
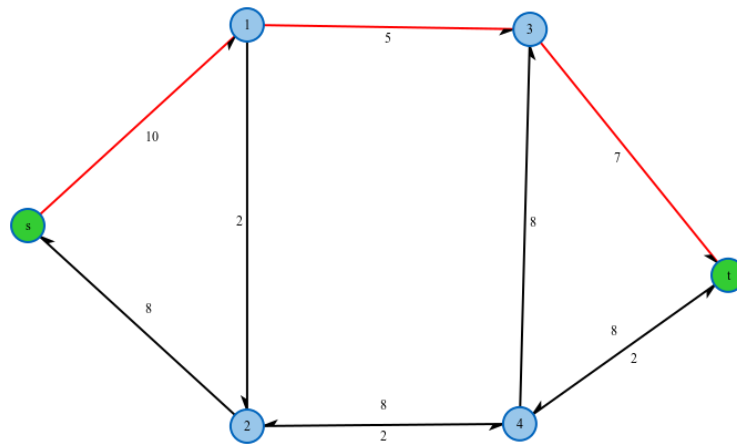
First augmentation:



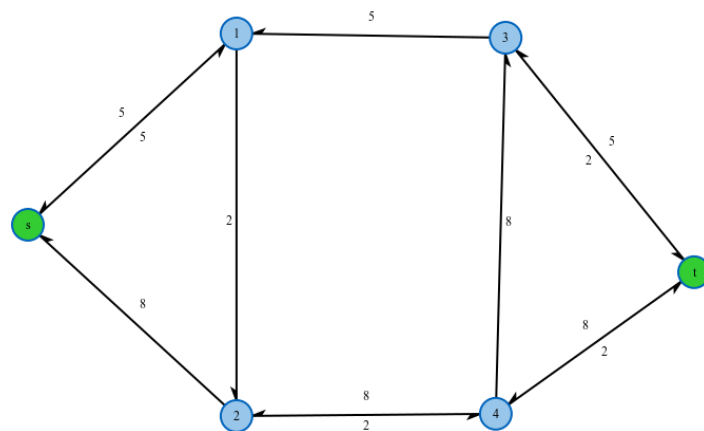
Residual Graph:



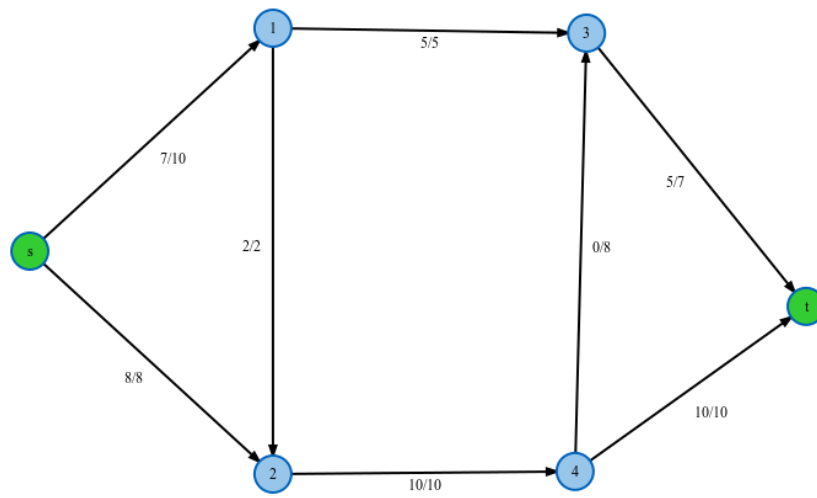
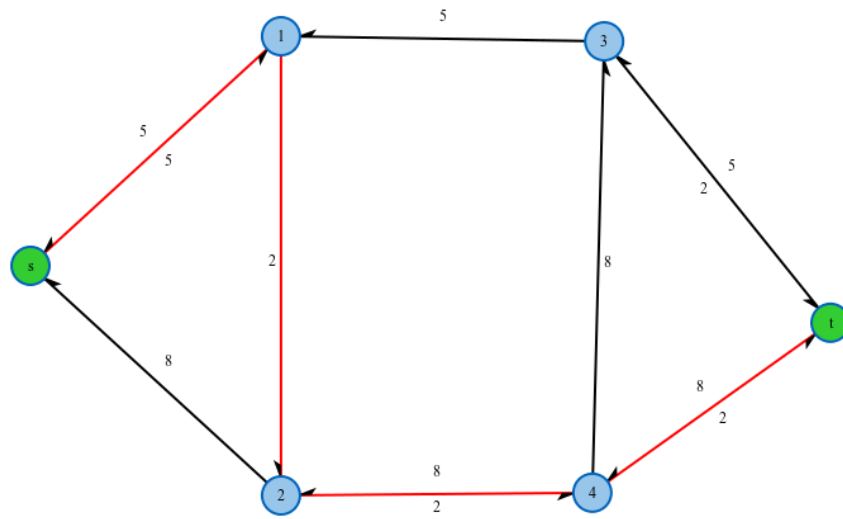
Second augmentation:



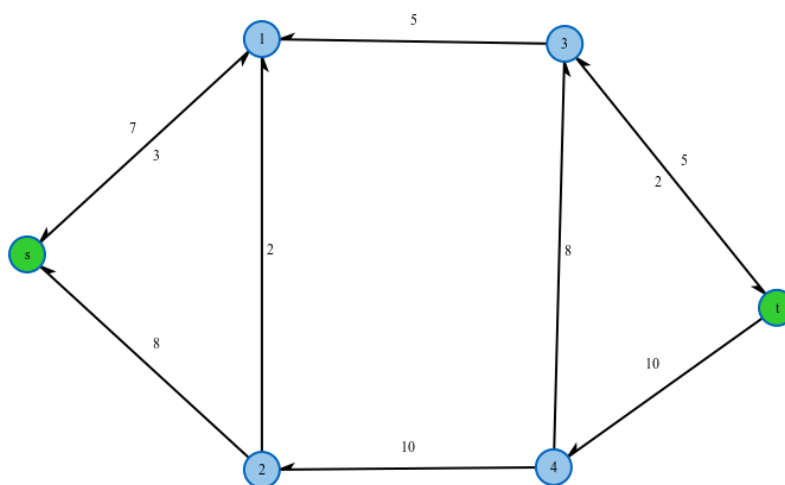
Residual Graph:



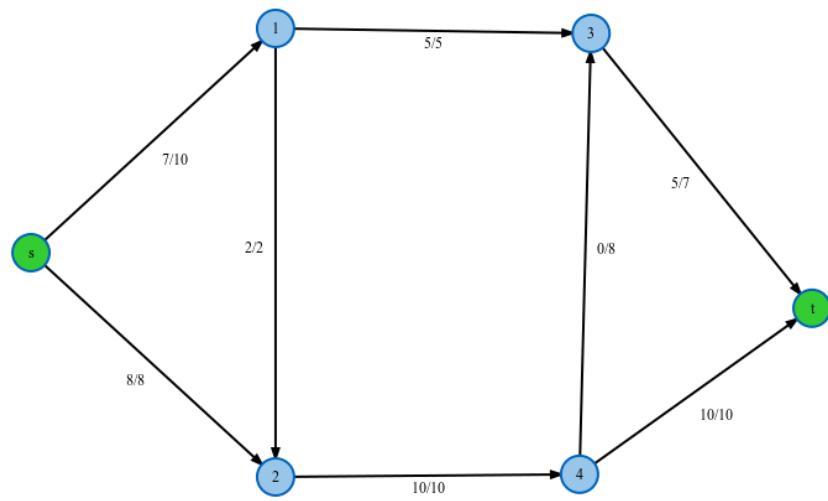
Third augmentation:



Residual Graph:



Result:



Max flow: 15