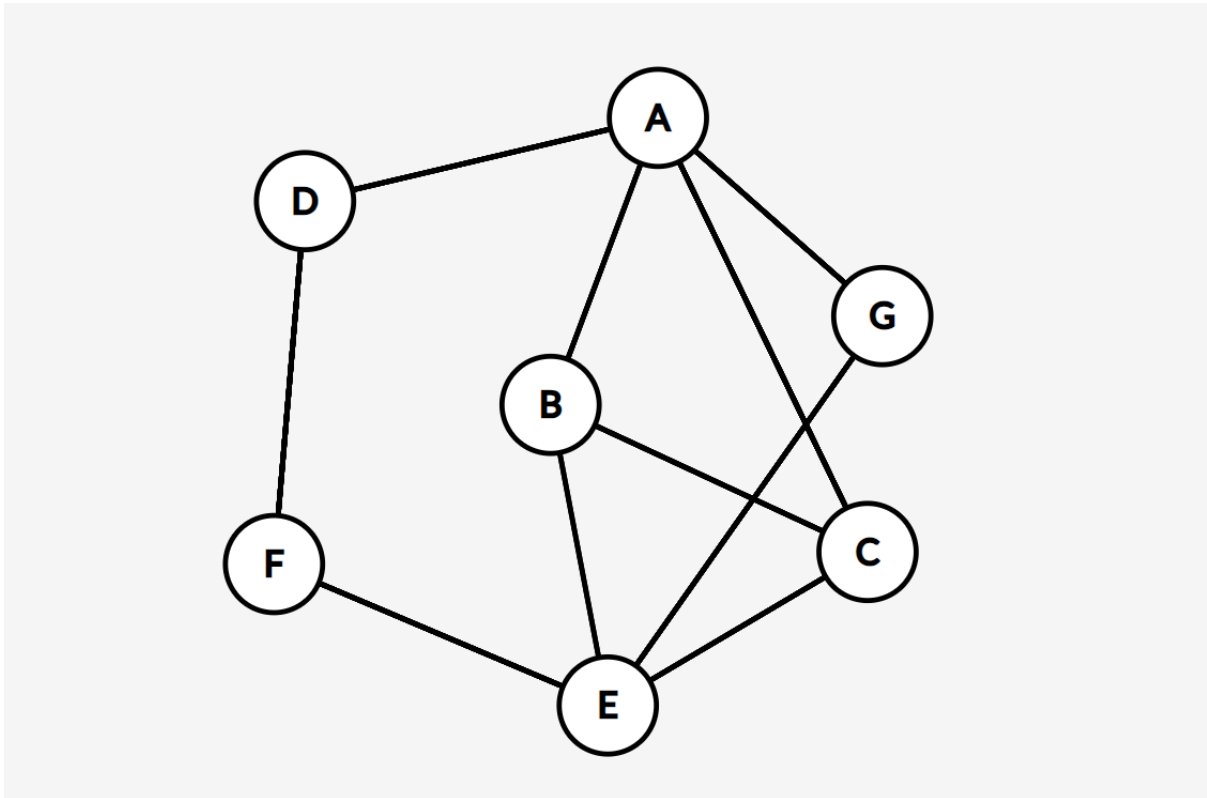
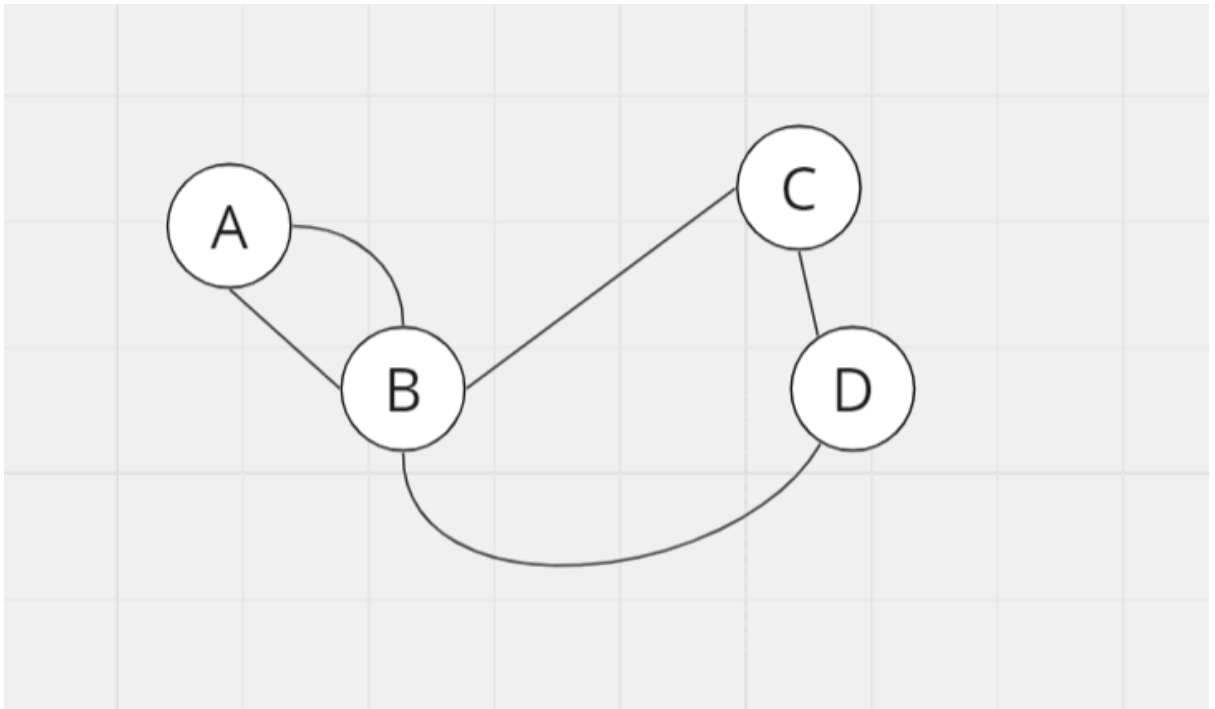


1. Output of breadth-first traversal from vertex b: $b \rightarrow a \rightarrow c \rightarrow d \rightarrow f \rightarrow e$
- 2.



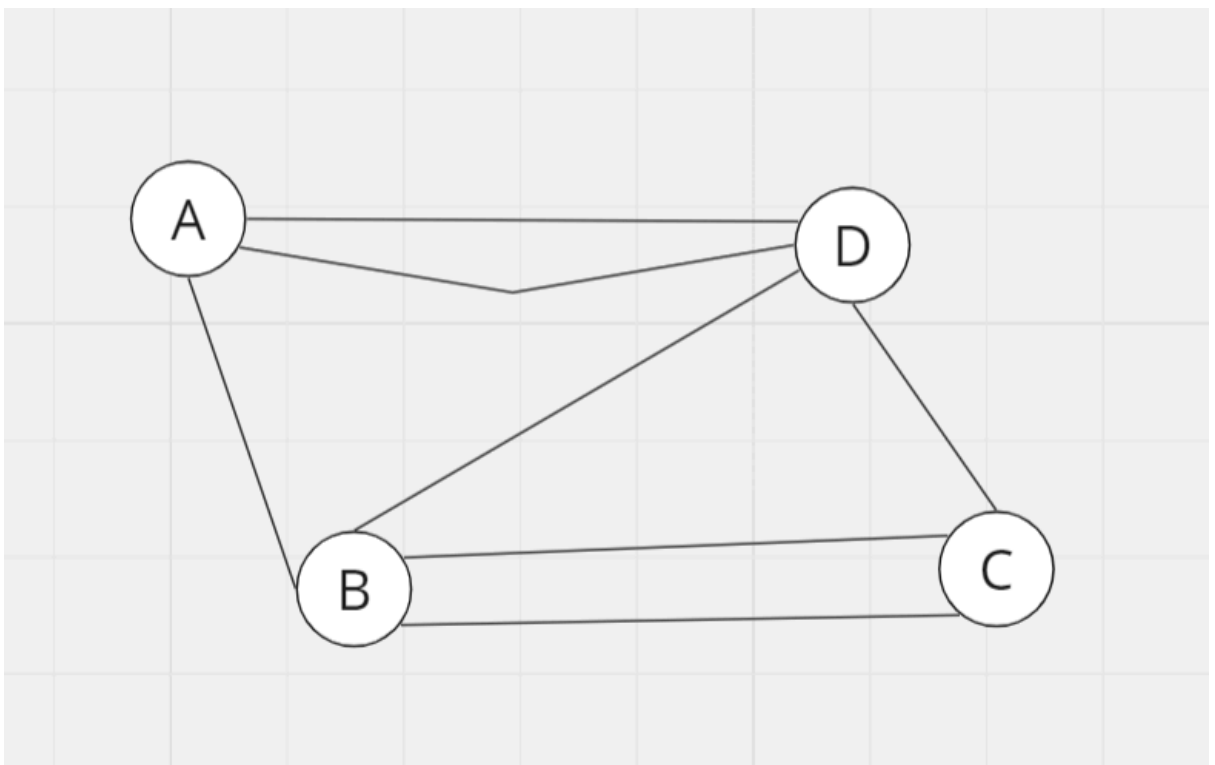
Breadth-first traversal from vertex A: $A \rightarrow B \rightarrow C \rightarrow D \rightarrow G \rightarrow E \rightarrow F$

3. the output of depth-first traversal from vertex A: $A \rightarrow B \rightarrow C \rightarrow D \rightarrow F \rightarrow G \rightarrow E$
4. the correct order of vertices selected into the set S until the vertex 5 is selected: $1 \rightarrow 2 \rightarrow 4 \rightarrow 3 \rightarrow 5$
5. the label of the vertex 4 when the shortest path from 1 to 5 is determined: **6**
6. order of vertices selected into the set S until the vertex F is selected: $A \rightarrow C \rightarrow E \rightarrow F$
- 7.



Euler cycle exists: $A \rightarrow B \rightarrow C \rightarrow D \rightarrow B \rightarrow A$

8.



The multigraph has an Euler path: $A \rightarrow D \rightarrow C \rightarrow B \rightarrow D \rightarrow B \rightarrow D \rightarrow A \rightarrow$

9. Multigraph has a Hamilton circle: $a \rightarrow b \rightarrow c \rightarrow d \rightarrow e$

10. total edge-weight of the minimum spanning tree of G:

$$BC + AC + AD + DF + EG + BE + DH = 2 + 4 + 5 + 7 + 8 + 9 + 12 = 47$$

11. total edge-weight of the minimum spanning tree of G:

$$BC + AC + AD + DF + GF + EB = 2 + 4 + 5 + 7 + 8 + 9 = 35$$

