Exercise 4. Answer Sheet

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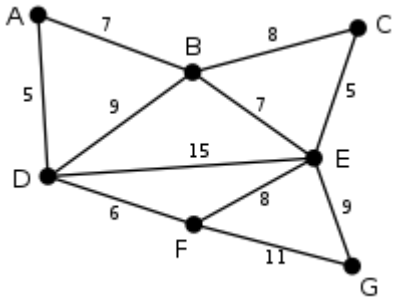
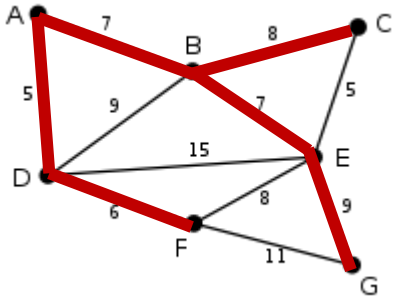
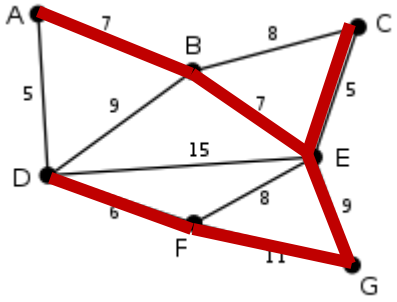
Problem 1. (*50 points*) Consider the following graph and assume node A as a root.



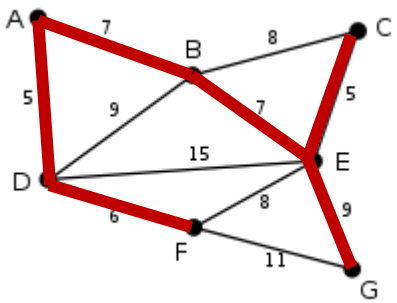
a) Draw a spanning tree obtained by using the Breadth Fist Search (BFS) algorithm.



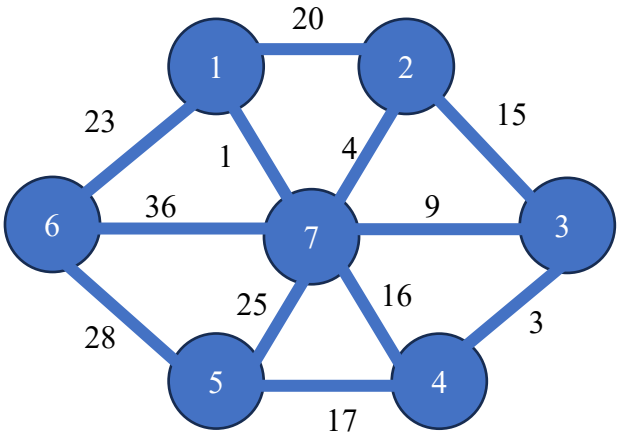
b) Draw a spanning tree obtained by using the Depth First Search (DFS) algorithm.

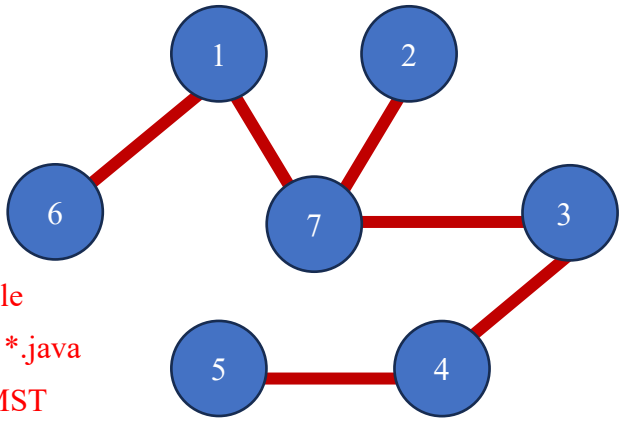


c) Draw the minimum spanning tree obtained by the Prim's algorithm.



Problem 2. *(50 points)* Write a program implementing Kruskal's algorithm. Upload your source code. Show your input graph and the obtained MST in the space below.





compile

javac *.java

java MST

input

7

12

1 2 20

1 6 23

1 7 1

2 3 15

2 7 4

3 4 3

3 7 9

4 5 17

4 7 16

5 6 28

5 7 25

6 7 36