1. Find the minimum spanning tree using the Prim’s algorithm for the following graph starting at node A. Show the order that the nodes are added into the minimum spanning tree. Draw the minimum spanning tree and indicate the weight summation of the MST.

A

B

C

D

E

F

G

H

1

2

1

5

1

1

4

4

2

6

8

6

1

[**Optional programming: extra 8%]** Implement the algorithm and print out the MST by your program.