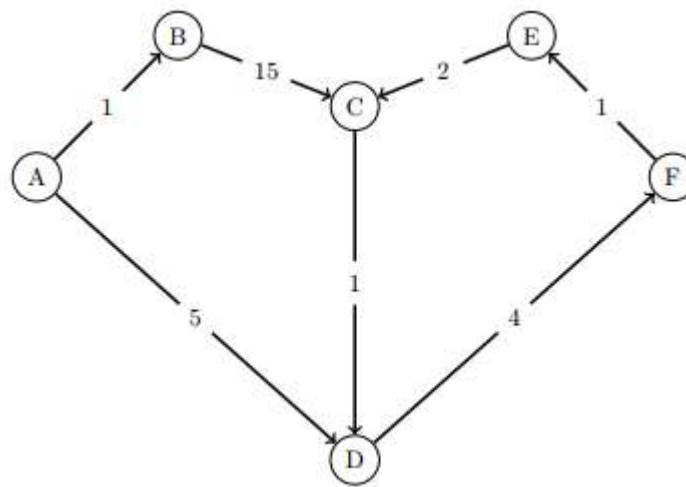


Online Assignment 4

Duration: 30 minutes

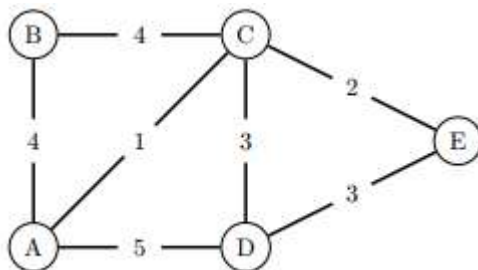
Question 1 (5 points)



- Please apply the Dijkstra's algorithm to draw the **shortest path tree (SPT)** from A to every vertex.
- Given the admissible heuristic function h from every vertex to F. What path will A^* return, starting from A and F is destination.

$$h(A, F) = 8, h(B, F) = 16, h(C, F) = 4, h(D, F) = 4, h(E, F) = 5$$

Question 2 (5 points) Given the following graph.



- Finding a valid MST using Prim's algorithm with A as the starting vertex
- Does this graph have only 1 MST? If you think this graph has more than 1 MST, please draw the second MST of this graph.