Kruskal MST:

Edge(2,4,1)

Create Cycle? No

MST = {(2,4,1)}

Edge(1,2,2)

Create Cycle?no

MST = {(2,4,1)(1,2,2)}

Edge:(4,1,3)

Create Cycle?yes

MST = {(2,4,1)(1,2,2)}

Edge(3,5,4)

Create Cycle?no

MST = {(2,4,1)(1,2,2)(3,5,4)}

Edge(3,4,5)

Create Cycle?no

MST = {(2,4,1)(1,2,2)(3,5,4)(3,4,5)}

Edge(1,3,6)

Create Cycle?yes

MST = {(2,4,1)(1,2,2)(3,5,4)(3,4,5)}

Edge(0,1,9)

Create Cycle?no

MST = {(2,4,1)(1,2,2)(3,5,4)(3,4,5)(0,1,9)}

Edge(0,3,13)

Create Cycle?yes

Return:

MST = {(2,4,1)(1,2,2)(3,5,4)(3,4,5)(0,1,9)}

Prims MST:

C = {0}

U ={1,2,3,4,5}

MST ={}

I =0

(u,v,w) =(0,1,9)

C = {0,1}

U ={2,3,4,5}

MST ={(0,1,9)}

I =1

(u,v,w) =(1,2,2)

C = {0,1,2}

U ={3,4,5}

MST ={(0,1,9),(1,2,2)}

I =2

(u,v,w) =(2,4,1)

C = {0,1,2,4}

U ={3,5}

MST ={(0,1,9),(1,2,2),(2,4,1)}

I =3

(u,v,w) =(3,4,5)

C = {0,1,2,4,3}

U ={5}

MST ={(0,1,9),(1,2,2),(2,4,1)(3,4,5)}

I =4

(u,v,w) =(5,3,4)

C = {0,1,2,4,3,5}

U ={}

MST ={(0,1,9),(1,2,2),(2,4,1)(3,4,5),(5,3,4)}

Return {(0,1,9),(1,2,2),(2,4,1)(3,4,5),(5,3,4)}

Topo sort:

In\_degree = [0,3,4,1,1,2,2,1,2]

T = []

Q = [0]

Iter 1

V = 0

T = [0]

In\_degree = [0,2,4,1,0,2,2,1,2]

Q = [4]

Iter 2

V = 4

T = [0,4]

In\_degree = [0,1,4,1,0,1,2,0,2]

Q = [7]

Iter 3

V = 5

T = [0,4,7,5]

In\_degree = [0,0,3,1,0,0,1,0,0]

Q = [1,8]

Iter 4

V = 1

T = [0,4,7,5,1]

In\_degree = [0,0,1,1,0,0,1,0,0]

Q = [8]

Iter 5

V = 8

T = [0,4,7,5,1,8]

In\_degree = [0,0,1,1,0,0,0,0,0]

Q = [6]

Iter 5

V = 6

T = [0,4,7,5,1,8,6]

In\_degree = [0,0,0,0,0,0,0,0,0]

Q = [2,3]

Iter 6

V = 2

T = [0,4,7,5,1,8,6,2]

In\_degree = [0,0,0,0,0,0,0,0,0]

Q = [3]

Iter 6

V = 3

T = [0,4,7,5,1,8,6,2,3]

In\_degree = [0,0,0,0,0,0,0,0,0]

Q = []

Return [0,4,7,5,1,8,6,2,3]