Artificial Intelligence Lab Assignment 3

adjancecy\_matrix =[ [0, 2, 0, 1],

[2, 0, 3, 0],

[0, 3, 0, 4],

[1, 0, 4, 0] ]

start = 0

available\_nodes = [0]

MST = [] # [ [ From | To | Weight] ]

while(len(available\_nodes)!=len(adjancecy\_matrix)):

next\_possible\_vertex = [] # [ [ From | To | Weight] ]

for node in available\_nodes:

for i in range(len(adjancecy\_matrix[node])):

if (adjancecy\_matrix[node][i] != 0) and (i not in available\_nodes):

next\_possible\_vertex.append([node, i, adjancecy\_matrix[node][i]])

max = 97000

for i in next\_possible\_vertex:

if i[2] < max:

new\_vertex = i

max = i[2]

MST.append(new\_vertex)

available\_nodes.append(new\_vertex[1])

print("\nMINIMUM SPANNING TREE AVAILABLE IS :")

print("\nFROM\tTO\tWEIGHT")

for i in MST:

print(i[0],"\t",i[1],"\t",i[2])

OUTPUT :

PS C:\Users\hp\Desktop\AI> python assi3.py

MINIMUM SPANNING TREE AVAILABLE IS :

FROM TO WEIGHT

0 3 1

0 1 2

1 2 3

PS C:\Users\hp\Desktop\AI>