# Prim's Algorithm in Python

INF = **9999999**

# number of vertices in graph

N = **5**

#creating graph by adjacency matrix method

G == [[0, 2, 0, 6, 0],

               [2, 0, 3, 8, 5],

               [0, 3, 0, 0, 7],

               [6, 8, 0, 0, 9],

               [0, 5, 7, 9, 0]]

selected\_node = [**0**, **0**, **0**, **0**, **0**]

no\_edge = **0**

selected\_node[**0**] = True

# printing for edge and weight

**print**("Edge : Weight**\n**")

**while** (no\_edge < N - **1**):

minimum = INF

a = **0**

b = **0**

**for** m **in** range(N):

**if** selected\_node[m]:

**for** n **in** range(N):

**if** ((**not** selected\_node[n]) **and** G[m][n]):

# not in selected and there is an edge

**if** minimum > G[m][n]:

minimum = G[m][n]

a = m

b = n

**print**(str(a) + "-" + str(b) + ":" + str(G[a][b]))

selected\_node[b] = True

no\_edge += **1**

**output:**

Edge Weight

0 - 1 2

1 - 2 3

0 - 3 6

1 - 4 5