

95. prims algorithm

Program:

INF = 9999999

V = 5

```
G = [[0, 9, 75, 0, 0],
      [9, 0, 95, 19, 42],
      [75, 95, 0, 51, 66],
      [0, 19, 51, 0, 31],
      [0, 42, 66, 31, 0]]
```

selected = [0, 0, 0, 0, 0]

no_edge = 0

selected[0] = True

print("Edge : Weight\n")

while (no_edge < V - 1):

 minimum = INF

 x = 0

 y = 0

 for i in range(V):

 if selected[i]:

 for j in range(V):

 if ((not selected[j]) and G[i][j]):

 if minimum > G[i][j]:

 minimum = G[i][j]

 x = i

 y = j

print(str(x) + "-" + str(y) + ":" + str(G[x][y]))

selected[y] = True

no_edge += 1

Output:

```
Edge : Weight
```

```
0-1:9
```

```
1-3:19
```

```
3-4:31
```

```
3-2:51
```

```
=== Code Execution Successful ===
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Time complexity: $O(V^2)$