PRIMS:

#include<stdio.h>

int a, b, u, v, n, i, j, ne = 1;

int visited[10] = {0}, min, mincost = 0, cost[10][10];

void main() {

printf("Prim's Algorithm");

printf("\nEnter the number of nodes:");

scanf("%d", & n);

printf("\nEnter the adjacency matrix:\n");

for (i = 1; i <= n; i++) {

for (j = 1; j <= n; j++) {

scanf("%d", & cost[i][j]);

if (cost[i][j] == 0)

cost[i][j] = 999;

}

}

visited[1] = 1;

printf("\n");

while (ne < n) {

for (i = 1, min = 999; i <= n; i++) {

for (j = 1; j <= n; j++) {

if (cost[i][j] < min) {

if (visited[i] != 0) {

min = cost[i][j];

a = u = i;

b = v = j;

}

}

}

}

if (visited[u] == 0 || visited[v] == 0) {

printf("\nEdge %d:(%d %d), Cost = %d", ne++, a, b, min);

mincost += min;

visited[b] = 1;

}

cost[a][b] = cost[b][a] = 999;

}

printf("\n\nMinimum cost=%d", mincost);

}