EXPERIMENT 24(prims algorithm)

CODE:

#include <stdio.h>

#define INF 9999

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

void prim() {

int edges = 0, i, j, u, v, min, total = 0;

visited[0] = 1; // start from node 0

while (edges < n - 1) {

min = INF;

for (i = 0; i < n; i++) {

if (visited[i]) {

for (j = 0; j < n; j++) {

if (!visited[j] && cost[i][j] < min) {

min = cost[i][j];

u = i; v = j;

}

}

}

}

printf("%d - %d : %d\n", u, v, min);

total += min;

visited[v] = 1;

edges++;

}

printf("Total cost = %d\n", total);

}

int main() {

int i, j;

printf("Enter number of nodes: ");

scanf("%d", &n);

printf("Enter cost adjacency matrix (9999 for no edge):\n");

for (i = 0; i < n; i++)

for (j = 0; j < n; j++)

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

prim();

return 0;

}}

OUTPUT:

