EXPERIMENT 25(Kruskal algorithm)

CODE:

#include <stdio.h>

int p[100];

int find(int x) {

while (p[x] != x) x = p[x];

return x;

}

int main() {

int n, e, u[100], v[100], w[100], i, j, t, cost = 0;

printf("Enter nodes and edges: ");

scanf("%d %d", &n, &e);

printf("Enter u v weight:\n");

for (i = 0; i < e; i++) scanf("%d %d %d", &u[i], &v[i], &w[i]);

for (i = 0; i < n; i++) p[i] = i;

for (i = 0; i < e-1; i++)

for (j = 0; j < e-i-1; j++)

if (w[j] > w[j+1]) {

t = w[j], w[j] = w[j+1], w[j+1] = t;

t = u[j], u[j] = u[j+1], u[j+1] = t;

t = v[j], v[j] = v[j+1], v[j+1] = t;

}

printf("MST edges:\n");

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

int a = find(u[i]), b = find(v[i]);

if (a != b) {

printf("%d - %d : %d\n", u[i], v[i], w[i]);

cost += w[i];

p[a] = b;

}

}

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

return 0;

}

OUTPUT:

