**EXPERIMENT NO :08**

#include<iostream>

using namespace std;

int main() {

int n, i, j, k, row, col, mincost=0, min;

char op;

cout<<"Enter no. of cities: ";

cin>>n;

int cost[n][n];

int visit[n];

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

visit[i] = 0;

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

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

cost[i][j] = -1;

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

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

cout<<"Do you want an edge between "<<i+1<<" and "<<j+1<<": ";

cin>>op;

if(op=='y' || op=='Y') {

cout<<"Enter weight: ";

cin>>cost[i][j];

cost[j][i] = cost[i][j];

}

}

}

visit[0] = 1;

for(k=0; k<n-1; k++) {

min = 999;

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

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

if(visit[i] == 1 && visit[j] == 0) {

if(cost[i][j] != -1 && min>cost[i][j]) {

min = cost[i][j];

row = i;

col = j;

}

}

}

}

mincost += min;

visit[col] = 1;

cost[row][col] = cost[col][row] = -1;

cout<<row+1<<"->"<<col+1<<endl;

}

cout<<"\nMin. Cost: "<<mincost;

return 0;

}

**OUTPUT :**

Enter no. of cities: 4

Do you want an edge between 1 and 2: y

Enter weight: 110

Do you want an edge between 1 and 3: y

Enter weight: 210

Do you want an edge between 1 and 4: n

Do you want an edge between 2 and 3: y

Enter weight: 310

Do you want an edge between 2 and 4: y

Enter weight: 410

Do you want an edge between 3 and 4: y

Enter weight: 510

1->2

1->3

2->4

Min. Cost: 730

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Process exited after 124.3 seconds with return value 0

Press any key to continue . . .