**ASSIGNMENT NO.4.**

**Aim :-** For a weighted graph G, find the minimum spanning tree using Prims algorithm .

**Program Code:-**

#include<iostream>

#include<conio.h>

#include<stdlib.h>

using namespace std;

int cost[10][10],i,j,k,n,stk[10],top,v,visit[10],visited[10],u;

main()

{

int m,c;

cout <<"enterno of vertices";

cin >> n;

cout <<"ente no of edges";

cin >> m;

cout <<"\nEDGES Cost\n";

for(k=1;k<=m;k++)

{

cin >>i>>j>>c;

cost[i][j]=c;

}

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

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

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

cost[i][j]=31999;

cout <<"ORDER OF VISITED VERTICES";

k=1;

while(k<n)

{

m=31999;

if(k==1)

{

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

for(j=1;j<=m;j++)

if(cost[i][j]<m)

{

m=cost[i][j];

u=i;

}

}

else

{

for(j=n;j>=1;j--)

if(cost[v][j]<m && visited[j]!=1 && visit[j]!=1)

{

visit[j]=1;

stk[top]=j;

top++;

m=cost[v][j];

u=j;

}

}

cost[v][u]=31999;

v=u;

cout<<v << " ";

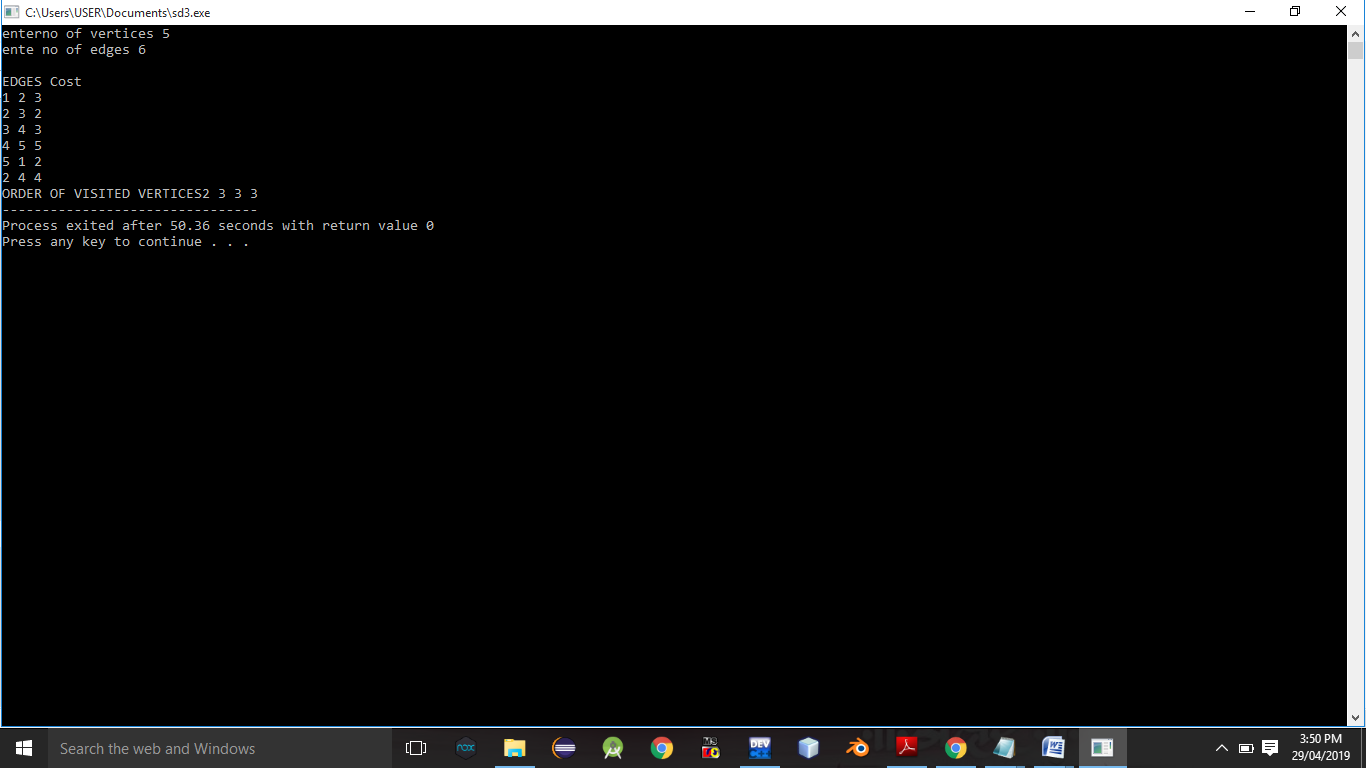
k++;

visit[v]=0; visited[v]=1;

}

}

**Output Screenshots:-**

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**Conclusion:-** Thus,we have studied prims algorithm.