**TOPOLOGY**

#include<iostream.h>

#include<conio.h>

int a[10][10],n,indegree[10];

void find\_indegree()

{

int j,i,sum;

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

{

sum=0;

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

sum+=a[i][j];

indegree[j]=sum;

}

}

void topology()

{

int i,u,v,t[10],s[10],top=-1,k=0;

find\_indegree();

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

{

if(indegree[i]==0)

s[++top]=i;

}

while(top!=-1)

{

u=s[top--];

t[k++]=u;

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

{

if(a[u][v]==1)

{

indegree[v]=-1;

s[++top]=u;

}

}

}

cout<<"The Topological Sequence is :"<<"\n";

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

cout<<t[i]<<"\t";

}

void main()

{

int i,j;

cout<<"Enter the Number of Nodes:";

cin>>n;

cout<<"Enter the Adajency Matrix:"<<"\n";

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

{

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

cin>>a[i][j];

}

topology();

getch();

}

OUTPUT:

Enter the Number of Nodes: 3

Enter the Adajency Matrix:

3 4 5

2 5 6

1 2 4

The Topological sequence is:

1400 4 0