**Program-6**

**Write a program to obtain the Topological ordering of vertices in a given digraph.**

#include<stdio.h>

#include<stdlib.h>

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

void find\_indegre()

{ int j,i,sum;

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

{

sum=0;

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

sum+=a[i][j];

indegre[j]=sum;

}

}

void topology()

{

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

find\_indegre();

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

{

if(indegre[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)

{

indegre[v]--;

if(indegre[v]==0) s[++top]=v;

}

}

}

printf("The topological Sequence is:\n");

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

printf("%d ",(t[i]+1));

}

void main()

{

int i,j;

printf("Enter number of vertices:");

scanf("%d",&n);

printf("\nEnter the adjacency matrix:\n");

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

{

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

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

}

topology();

}