**ADA LAB-6**

* **TOPOLOGICAL ORDERING OF VERTICES IN A DIGRAPH**
  + **PROGRAM**

#include<stdio.h>

int temp[10],k=0;

void topo(int n,int indegree[10],int a[10][10])

{

int i,j;

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

{

if(indegree[i]==0)

{

indegree[i]=1;

temp[++k]=i;

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

{

if(a[i][j]==1&&indegree[j]!=-1)

indegree[j]--;

}

i=0;

}

}

}

void main()

{

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

printf("enter the number of vertices:");

scanf("%d",&n);

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

indegree[i]=0;

printf("\n enter the adjacency matrix\n");

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

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

{

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

if(a[i][j]==1)

indegree[j]++;

}

topo(n,indegree,a);

if(k!=n)

printf("topological ordering is not possible\n");

else

{

printf("\n topological ordering is :\n");

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

printf("v%d\t",temp[i]);

}

}

* + **OUTPUT**