PROGRAM 6

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

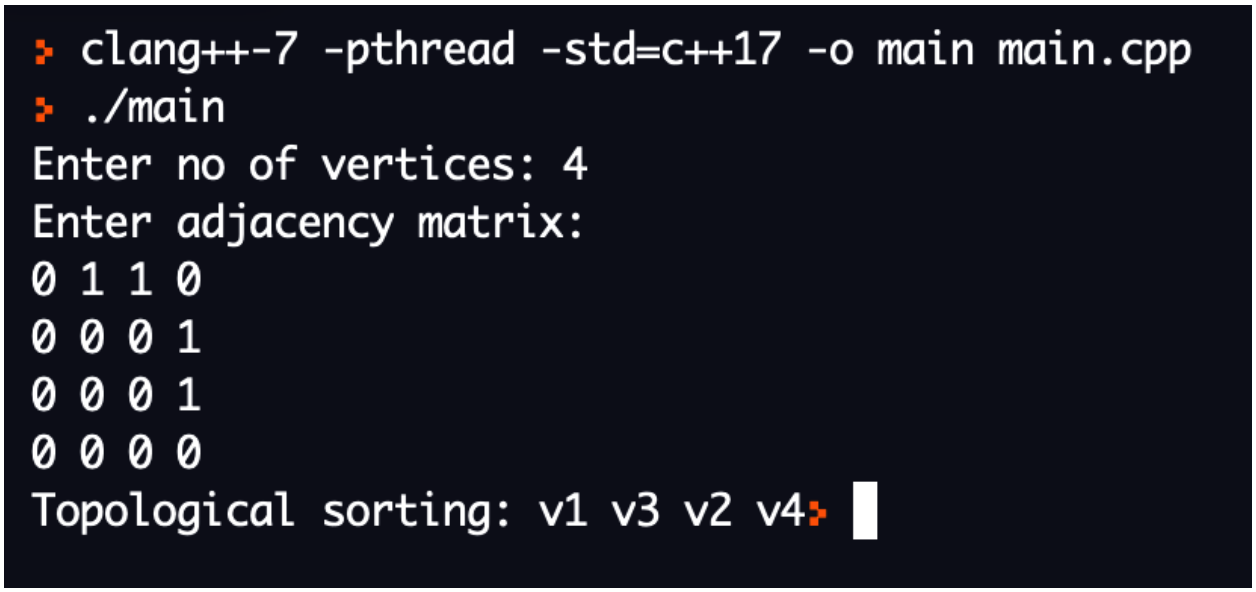
//Code

```
#include<iostream>
using namespace std;
int s[10],top=0;
int visited[10],a[10][10];

void topo(int v,int n){
   visited[v]=1;
   for(int i=0;i<n;i++){
      if(a[v][i] && !visited[i])
         topo(i,n);
   }
   s[top++]=v;
}

int main(){
   int n;
   cout<<"Enter no of vertices: ";
   cin>>n;
   cout<<"Enter adjacency matrix:";
   for(int i=0;i<n;i++)
      for(int j=0;j<n;j++)
         cin>>a[i][j];
   topo(0,n);
   for(int i=0;i<n;i++)
      if(!visited[i])
         topo(i,n);
   cout<<"Topological sorting:";
   for(int i=top-1;i>=0;i--)
      cout<<" v"<<(s[i]+1);
}
```

//Output


clang++-7 -pthread -std=c++17 -o main main.cpp
./main
Enter no of vertices: 4
Enter adjacency matrix:
0 1 1 0
0 0 0 1
0 0 0 1
0 0 0 0
Topological sorting: v1 v3 v2 v4