

```
1  #include<stdio.h>
2  |  int temp[10],k=0;
3
4  void topo(int n,int indegree[10],int a[10][10])
5  |  {
6  |  int i,j;
7
8  |  for(i=1;i<=n;i++)
9  |  |  {
10 |  |  |  if(indegree[i]==0)
11 |  |  |  |  {
12 |  |  |  |  indegree[i]=1;
13 |  |  |  |  temp[++k]=i;
14 |  |  |  |  for(j=1;j<=n;j++)
15 |  |  |  |  |  {
16 |  |  |  |  |  |  if(a[i][j]==1&&indegree[j]
17 |  |  |  |  |  |  |  !=-1)
18 |  |  |  |  |  |  |  indegree[j]--;
19 |  |  |  |  |  |  }
20 |  |  |  |  }
21 |  |  }
22 |  }
23
24 int main()
25 |  {
26 |  int i,j,n,indegree[10],a[10][10];
27 |  printf("enter the number of vertices:");
28 |  scanf("%d",&n);
29 |  for(i=1;i<=n;i++)
30 |  |  indegree[i]=0;
31
32 |  printf("\n enter the adjacency matrix\n");
33 |  for(i=1;i<=n;i++)
```



```
main.c
33     for(i=1;i<=n;i++)
34     for(j=1;j<=n;j++)
35     {
36         scanf("%d",&a[i][j]);
37         if(a[i][j]==1)
38             indegree[j]++;
39     }
40
41     topo(n,indegree,a);
42
43     if(k!=n)
44         printf("topological ordering is not possible\n");
45
46     else
47     {
48         printf("\n topological ordering is :\n");
49         for(i=1;i<=k;i++)
50             printf("v%d\t",temp[i]);
51     }
52 }
```



```
> clang-7 -pthread -lm -o main main.c
```

```
> ./main
```

```
enter the number of vertices:5
```

```
enter the adjacency matrix
```

```
0 1 1 0 0
```

```
0 0 0 1 0
```

```
0 0 0 1 0
```

```
0 0 0 0 1
```

```
0 0 0 0 0
```

```
topological ordering is :
```

```
v1 v2 v3 v4 v5 > 
```