

*topologicalOrder.c X

```
1  #include<stdio.h>
2  #include<conio.h>
3  int a[10][10],n,indegre[10];
4  void find_indegre()
5  { int j,i,sum;
6  for(j=0;j<n;j++)
7  {
8  sum=0;
9  for(i=0;i<n;i++)
10 sum+=a[i][j];
11 indegre[j]=sum;
12 }
13 }
14 void topology()
15 {
16 int i,u,v,t[10],s[10],top=-1,k=0;
17 find_indegre();
18 for(i=0;i<n;i++)
19 {
20 if(indegre[i]==0) s[++top]=i;
21 }
22 while(top!=-1)
23 {
24 u=s[top--];
25 t[k++]=u;
26 for(v=0;v<n;v++)
27 {
28 if(a[u][v]==1)
29 {
30 indegre[v]--;
31 if(indegre[v]==0) s[++top]=v;
32 }
33 }
34 }
35 printf("The topological Sequence is:\n");
36 for(i=0;i<n;i++)
```


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```
18     for(i=0;i<n;i++)
19     {
20         if(indegre[i]==0) s[++top]=i;
21     }
22     while(top!=-1)
23     {
24         u=s[top--];
25         t[k++]=u;
26         for(v=0;v<n;v++)
27         {
28             if(a[u][v]==1)
29             {
30                 indegre[v]--;
31                 if(indegre[v]==0) s[++top]=v;
32             }
33         }
34     }
35     printf("The topological Sequence is:\n");
36     for(i=0;i<n;i++)
37         printf("%d ",t[i]);
38 }
39 void main()
40 {
41     int i,j;
42     printf("Enter number of jobs:");
43     scanf("%d",&n);
44     printf("\nEnter the adjacency matrix:\n");
45     for(i=0;i<n;i++)
46     {
47         for(j=0;j<n;j++)
48             scanf("%d",&a[i][j]);
49     }
50     topology();
51 }
52
```


Enter number of jobs:6

Enter the adjacency matrix:

```
0 0 1 1 0 0
0 0 0 1 1 0
0 0 0 1 0 1
0 0 0 0 0 1
0 0 0 0 0 1
0 0 0 0 0 0
```

The topological Sequence is:

```
1 4 0 2 3 5
```

Process returned 6 (0x6) execution time : 56.674 s

Press any key to continue.