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LAB-6 (Topological Sorting)

(1BM19CS158)

```
#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;
    }
   }
}
int 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("\nTopological ordering is :\n");
  for(i=1; i<=k; i++)
  printf("%d\t", temp[i]);
}
  printf("\n");
  return 0;
}
```