

Design and implement C/C++ Program to obtain the Topological ordering of vertices in a given digraph.

```
#include <stdio.h>
```

```
void readgraph(int n,int a[10][10])
```

```
{
    int i,j;
    for(i=0;i<n;i++)
    {
        for(j=0;j<n;j++)
            scanf("%d", &a[i][j]);
    }
}
```

```
void find_indegree(int n, int a[10][10], int indegre[])
```

```
{
    int i,j,sum;
    for(j=0;j<n;j++)
    {
        sum=0;
        for(i=0;i<n;i++)
            sum+=a[i][j];

        indegre[j]=sum;
    }
}
```

```
void topological_sort(int n, int a[10][10])
```

```
{
    int i, k=0, u, v, top, t[10], indegre[10], s[10];
```

```

find_indegree(n,a,indegre);

top=-1;

for(i=0;i<n;i++)
{
    if(indegre[i]==0) s[++top]=i;
}

while(top!=-1)
{
    u=s[top--];
    t[k++]=u;
    for(v=0;v<n;v++)
    {
        if(a[u][v]==1)
        {
            indegre[v]--;
            if(indegre[v]==0)
            {
                s[++top]=v;
            }
        }
    }
}

printf("The topological sort sequence is: ");

for(i=0;i<n;i++)
printf("%d",t[i]);
}

```

```

void main()
{
    int n, a[10][10];

    printf("\n Enter number of values");
}

```

```
scanf("%d",&n);

printf("\n Enter adjacency matrix");
readgraph(n,a);
topological_sort(n,a);
}
```