

## WEEK 2

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

**CODE:**

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

```
#include<conio.h>
```

```
void main(){
```

```
    int a[10][10],n,i,j;
```

```
    int indeg[10],flag[10],c=0;
```

```
    printf("Enter number of vertices \n");
```

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

```
    printf("Enter adjacency matrix: \n");
```

```
    for(i=0;i<n;i++)
```

```
        for(j=0;j<n;j++)
```

```
            scanf("%d",&a[i][j]);
```

```
    for(i=0;i<n;i++)
```

```
        indeg[i]=0;
```

```
    for(i=0;i<n;i++)
```

```
flag[i]=0;
```

```
for(i=0;i<n;i++)
```

```
for(j=0;j<n;j++)
```

```
if(a[i][j]==1)
```

```
indeg[j]+=1;
```

```
printf("Order is : ");
```

```
while(c<=n)
```

```
{
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        if(indeg[i]==0 && flag[i]==0)
```

```
        {
```

```
            printf("%d ",i+1);
```

```
            flag[i]=1;
```

```
        }
```

```
    }
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        if(flag[i]==1)
```

```
        {
```

```
            for(j=0;j<n;j++)
```

```
            {
```

```
                if(a[i][j]==1)
```

```
                {
```

```

        indeg[j]-=1;
        a[i][j]=0;
    }
}
}
}
C++;
}
}

```

## OUTPUT :

```

"C:\Users\deepi\OneDrive\De"
Enter number of vertices
6
Enter adjacency matrix:
0 1 1 0 0 0
0 0 0 1 1 0
0 0 0 1 0 1
0 0 0 0 1 0
0 0 0 0 0 0
0 0 0 0 0 0
Order is : 1 2 3 4 6 5
Process returned 6 (0x6)   execution time : 25.475 s
Press any key to continue.

```