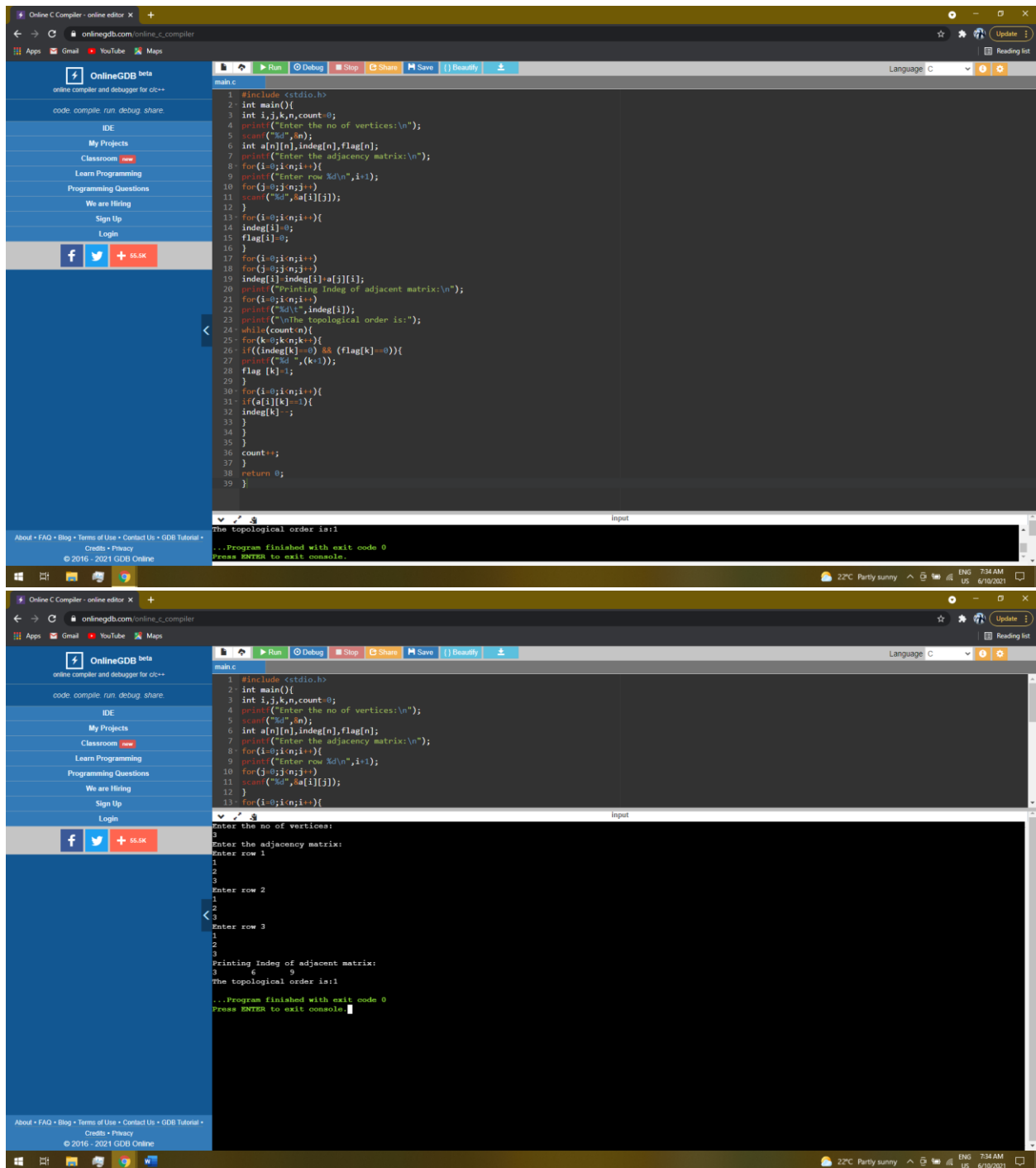


OUTPUT FOR TOPOLOGICAL SORT



The first screenshot shows the OnlineGDB interface with the following C code:

```
1 #include <stdio.h>
2 int main(){
3     int i,j,k,n,count=0;
4     printf("Enter the no of vertices:\n");
5     scanf("%d",&n);
6     int a[n][n],indeg[n],flag[n];
7     printf("Enter the adjacency matrix:\n");
8     for(i=0;i<n;i++){
9         printf("Enter row %d\n",i+1);
10        for(j=0;j<n;j++){
11            scanf("%d",&a[i][j]);
12        }
13        for(i=0;i<n;i++){
14            indeg[i]=0;
15            flag[i]=0;
16        }
17        for(i=0;i<n;i++){
18            for(j=0;j<n;j++){
19                indeg[i] += a[j][i];
20            }
21            printf("Printing Indeg of adjacent matrix:\n");
22            printf("%d\t",indeg[i]);
23            printf("\nThe topological order is:");
24            while(count<n){
25                for(k=n;k>0;--k){
26                    if((indeg[k]==0) && (flag[k]==0)){
27                        printf("%d ",k);
28                        flag[k]=1;
29                    }
30                    for(i=0;i<n;i++){
31                        if(a[i][k]==1){
32                            indeg[i]--;
33                        }
34                    }
35                }
36                count++;
37            }
38            return 0;
39        }
```

The output shows: "The topological order is:1".

The second screenshot shows the same program with user input:

```
Enter the no of vertices:
3
Enter the adjacency matrix:
Enter row 1
1
2
3
Enter row 2
1
2
3
Enter row 3
1
2
3
Printing Indeg of adjacent matrix:
3 6 9
The topological order is:1
...Program finished with exit code 0
Press ENTER to exit console.
```

CODE FOR TOPOLOGICAL SORT

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

```
int main(){
```

```
int i,j,k,n,count=0;
```

```

printf("Enter the no of vertices:\n");
scanf("%d",&n);
int a[n][n],indeg[n],flag[n];
printf("Enter the adjacency matrix:\n");
for(i=0;i<n;i++){
printf("Enter row %d\n",i+1);
for(j=0;j<n;j++)
scanf("%d",&a[i][j]);
}
for(i=0;i<n;i++){
indeg[i]=0;
flag[i]=0;
}
for(i=0;i<n;i++)
for(j=0;j<n;j++)
indeg[i]=indeg[i]+a[j][i];
printf("Printing Indeg of adjacent matrix:\n");
for(i=0;i<n;i++)
printf("%d\t",indeg[i]);
printf("\nThe topological order is:");
while(count<n){
for(k=0;k<n;k++){
if((indeg[k]==0) && (flag[k]==0)){
printf("%d ",(k+1));
flag [k]=1;
}
}
for(i=0;i<n;i++){
if(a[i][k]==1){
indeg[k]--;
}
}
}
}

```

```
}  
}  
}  
count++;  
}  
return 0;  
}
```