topological_source_removal.c bfs_nodes.c

topological_source_removal.c

```c
/*Write program to obtain the Topological ordering of vertices in a given digraph using Source Removal method*/
#include <stdio.h>

int main()
{
int i,j,k,n,a[10][10],indegree[10],flag[10],count=0;

printf("Enter the No: of Vertices:\n");
scanf("%d",&n);

printf("Enter the 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++){
        indegree[i]=0;
        flag[i]=0;
    }

    for(i=0;i<n;i++)
        for(j=0;j<n;j++)
            indegree[i]=indegree[i]+a[j][i];

    printf("\nThe topological order is:");

    while(count<n){
        for(k=0;k<n;k++){
            if((indegree[k]==0) && (flag[k]==0)){
                printf("%d ",(k+1));
                flag [k]=1;
            }

            for(i=0;i<n;i++){
                if(a[i][k]==1)
                    indegree[k]--;
```

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```c
        for(k=0;k<n;k++){
            if((indegree[k]==0) && (flag[k]==0)){
                printf("%d ",(k+1));
                flag [k]=1;
            }

            for(i=0;i<n;i++){
                if(a[i][k]==1)
                    indegree[k]--;
            }
        }

        count++;
    }

    return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL 1: powershell

```
PS C:\Users\muska\OneDrive\Desktop\C programs> gcc topological_source_removal.c
PS C:\Users\muska\OneDrive\Desktop\C programs> .\a.exe
Enter the No: of Vertices:
5
Enter the Adjacency Matrix:
0 0 1 0 0
0 0 1 0 0
0 0 0 1 0
0 0 0 0 1
0 0 0 0 0

The topological order is:1 2 3 4 5
PS C:\Users\muska\OneDrive\Desktop\C programs>
```