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#include <stdio.h>

const int MAX = 10;
void fnTopological(int a[MAX][MAX], int n);
int main(void)
{
    int a[MAX][MAX],n;
    int i,j;

    printf("Topological Sorting Algorithm -\n");
    printf("\nEnter the number of vertices : ");
    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]);

    fnTopological(a,n);
    printf("\n");
    return 0;
}

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void fnTopological(int a[MAX][MAX], int n)
{
    int in[MAX], out[MAX], stack[MAX], top=-1;
    int i,j,k=0;

    for (i=0;i<n;i++)
    {
        in[i] = 0;
        for (j=0; j<n; j++)
            if (a[j][i] == 1)
                in[i]++;
    }

    while(1)
    {
        for (i=0;i<n;i++)
        {
            if (in[i] == 0)
            {
                stack[++top] = i;
                in[i] = -1;
            }
        }

        if (top == -1)
            break;

        out[k] = stack[top--];

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

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        if (a[out[k]][i] == 1)
            in[i]--;
    }
    k++;
}

printf("Topological Sorting (JOB SEQUENCE) is:- \n");
for (i=0;i<k;i++)
    printf("%d ",out[i] + 1);
}

```

OUTPUT

Input Graph : 5 vertices 0 0 1 0 0 0 0 1 0 0 0 0 0 1 1 0 0 0 0 1 0 0
0 0 0

Topological Sorting (JOB SEQUENCE) is:- 2 1 3 4 5