

```

1  #include<stdio.h>
2  #define MAX 10
3  int visited[MAX];
4  int adj[MAX][MAX];
5  int n;
6
7  void DFS(int v){
8      visited[v]=1;
9      printf("%d ",v);
10     for(int i=0;i<n;i++){
11         if(adj[v][i] ==1 && !visited[i]){
12             DFS(i);
13         }
14     }
15 }
16
17 int main(){
18     printf("Enter number of vertices: ");
19     scanf("%d",&n);
20     printf("Enter adjacency matrix:\n");
21     for(int i=0;i<n;i++){
22         for(int j=0;j<n;j++){
23             scanf("%d",&adj[i][j]);
24         }
25     }
26     for(int i=0;i<n;i++){
27         visited[i]=0;
28     }
29     printf("DFS Traversal starting from vertex 0:\n");
30     DFS(0);
31     return 0;
32 }

```

```

Enter number of vertices: 4
Enter adjacency matrix:
0 1 1 0
1 0 0 1
1 0 0 0
0 1 0 0
DFS Traversal starting from vertex 0:
0 1 3 2

```

=== Code Execution Successful ===

DFS:-

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

```
#define MAX 10
```

```
int visited[MAX];
```

```
int adj_max[MAX][MAX];
```

```
int n;
```

```
void DFS(int v) {
```

```
    visited[v] = 1;
```

```
    printf("%d ", v);
```

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

```
        if (adj_max[v][i] == 1 && !visited[i]) {
```

```
            DFS(i);
```

```
int main() {
```

```
    printf("Enter number : ");
```

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

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

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

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

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

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

```
            visited[i] = 0;
```

```
    printf("DFS Traversal starting from vertex 0 is : ");
```

```
    DFS(0);
```

```
    return 0;
```

o/p

Enter number of vertices: 4

Enter adjacency Matrix:

0 1 1 0

1 0 0 1

1 0 0 0

0 1 0 0

DFS Transversal

starting from vertex 0;

0 1 3 2