

ADA Lab

```
#include<stdio.h>
#include<stdlib.h>
int a[10][10], n, vis[10];
int dfs();
int main()
{
    int i, j;
    printf("\n Enter number of vertices\n");
    scanf("%d",&n);
    printf("Enter adjacency matrix\n");
    for(i=1;i<=n;i++)
    {
        for(j=1;j<=n;j++)
        {
            scanf("%d",&a[i][j]);
        }
    }
    for(i=1;i<=n;i++)
        vis[i]=0;
    printf("DFS traversal\n");
    for(i=1;i<=n;i++)
    {
        if(vis[i]==0)
            dfs(i);
    }
    return 0;
}
int dfs(int v)
{

```

```

int i;
vis[v]=1;
printf("%d",v);
for(i=1;i<=n;i++)
{
    if(a[v][i]==1&& vis[i]==0)
        dfs(i);
}
return 0;
}

```

OUTPUT

```

Enter number of vertices
8
Enter adjacency matrix
0 1 1 0 0 0 0 0
1 0 0 1 1 0 0 0
1 0 0 0 0 1 1 0
0 1 0 0 0 0 0 1
0 1 0 0 0 0 0 1
0 0 1 0 0 0 0 1
0 0 1 0 0 0 0 1
0 0 0 1 1 1 1 0
DFS traversal
12485637

```