CSA 0317 DATA STRUCTURES

PROGRAM 22

```
#include <stdio.h>
#define MAX 10

int visited[MAX];

void DFS(int adj[MAX][MAX], int n, int start) {
   int i;
   printf("%d ", start);
   visited[start] = 1;

   for (i = 0; i < n; i++) {
      if (adj[start][i] == 1 && !visited[i])
         DFS(adj, n, i);
   }
}

int main() {
   int n, adj[MAX][MAX], i, j, start;

   printf("Enter number of vertices: ");
   scanf("%d", &n);

   printf("Enter adjacency matrix:\n");
   for (i = 0; i < n; i++)
      for (j = 0; j < n; j++)
         scanf("%d", &adj[i][j]);

   printf("Enter starting vertex: ");
```

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

    for (i = 0; i < n; i++)
        visited[i] = 0;

    printf("DFS Traversal: ");
    DFS(adj, n, start);
    return 0;
}
```

Output: