Lab-3 Depth-First-Traversal 06/05/2021.

```
#include<stdio.h>
#include<time.h>.
void DFS(int)
int G[10][10], visited[10], n;
void main()
{
int i,j;
clock_t start, end;
double time_u;
printf("enter no. of vertices\n");
scanf("%d",&n);
printf("\n enter the adjacency matrix of the graph");
start=clock();
for(i=0; i<n ; i++)
for(j=0 ; j<n ; j++)
scanf("%d", G[i][j]);
for(i=0; i<n ; i++)
visited[i]=0;
DFS(0);
end=clock();
time_u=(double)(end-start)/clocks_per_second);
printf("Time complexity = %fs", time_u);
}
void DFS(int i)
{
int j;
Printf("\n%d",i);
```

```
    visited[i]=1;
for(j=0; j<n; j++)
if(!visited[j] && G[i][j]==1)
    DFS(j);
}.
```

Time complexity : DFS

n = 2 T = 0.000119 s.

n = 3 T = 0.000209 s

n = 5 T = 0.000219 s.

n = 8 T = 0.000284 s

n = 10.