**Week 2 ADA LAB**

**20-06-2023**

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**Depth First Search**

**Code:-**

#include<stdio.h>

#include<conio.h>

void DFS(int);

int a[10][10],vis[10],n;

void main(){

int i,j;

printf("Enter the number of vertices ");

scanf("%d",&n);

printf("Enter the Adjacency Matrix\n");

for(i=1;i<=n;i++){

for(j=1;j<=n;j++){

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

}

}

printf("DFS Traversal\n");

for(i=1;i<=n;i++){

if(vis[i]==0){

DFS(i);

}

}

check();

getch();

}

void DFS(int v){

int i;

vis[v]=1;

printf("%d\t",v);

for(i=1;i<=n;i++){

if(a[v][i]==1 && vis[i]==0){

DFS(i);

}

}

}

void check(){

for(int i=1;i<=n;i++){

if(vis[i]!=1){

printf("\nNot connected");

return;

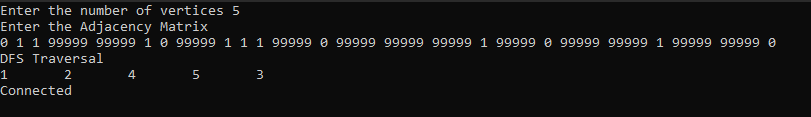
}

}

printf("\nConnected");

}

**Output:-**

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