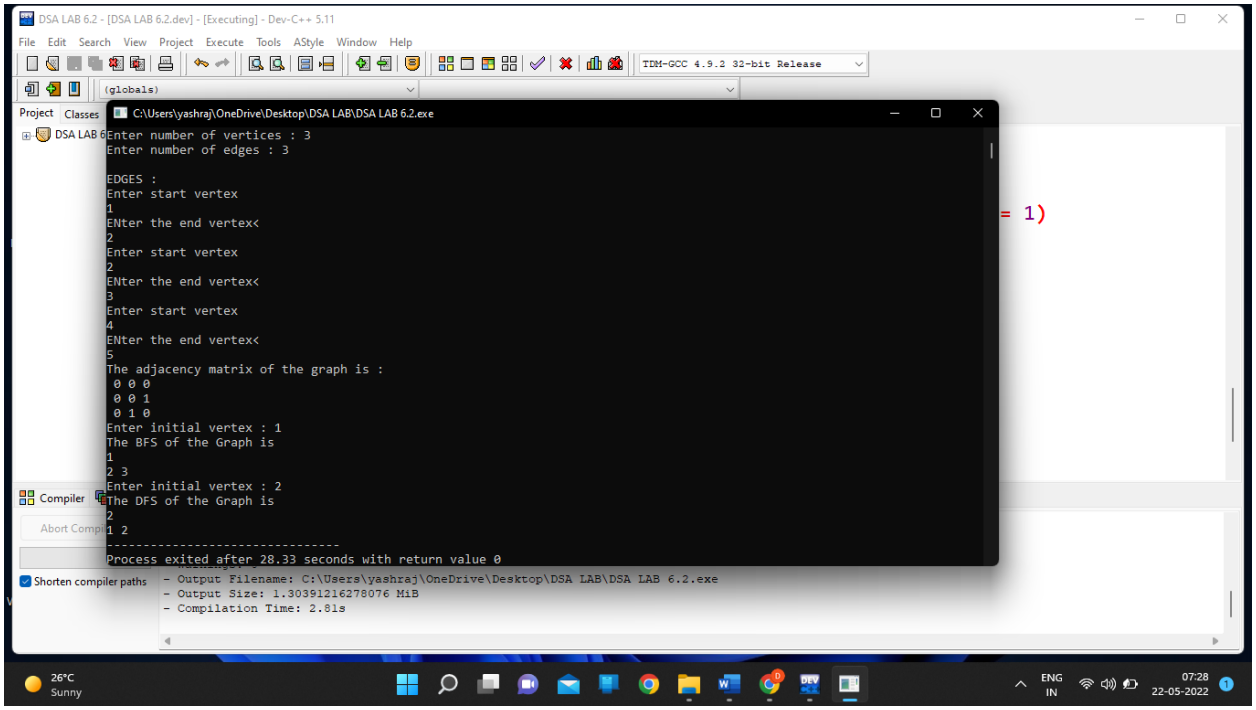
11 YASHRAJ DEEPAK DEVRAT

```
#include <iostream>
#include <stdlib.h>
using namespace std;

int cost[10][10], i, j, k, n, qu[10], front, rear, v, visit[10], visited[10];
int stk[10], top, visit1[10], visited1[10];

int main()
{
        int m;
        cout << "Enter number of vertices : ";
        cin >> n;
        cout << "Enter number of edges : ";
        cin >> m;

        cout << "\nEDGES :\n";
        for (k = 1; k <= m; k++)
        {
      cout<<"Enter start vertex"<<endl;
        cin>>i;
      cout<<"ENter the end vertex<"<<endl;
```

```
cin>>j;
cost[i][j] = 1;
cost[j][i] = 1;
}

//display function
cout << "The adjacency matrix of the graph is : " << endl;
for (i = 0; i < n; i++)
{
for (j = 0; j < n; j++)
{
cout << " " << cost[i][j];
}
cout << endl;
}

cout << "Enter initial vertex : ";
cin >> v;
cout << "The BFS of the Graph is\n";
cout << v<<endl;
visited[v] = 1;
k = 1;
while (k < n)
```

```
{
for (j = 1; j <= n; j++)
if (cost[v][j] != 0 && visited[j] != 1 && visit[j] != 1)
{
    visit[j] = 1;
    qu[rear++] = j;
}
v = qu[front++];
cout << v << " ";
k++;
visit[v] = 0;
visited[v] = 1;
}

cout <<endl<<"Enter initial vertex : ";
cin >> v;
cout << "The DFS of the Graph is\n";
cout << v<<endl;
visited[v] = 1;
k = 1;
while (k < n)
{
for (j = n; j >= 1; j--)
```

```
        if (cost[v][j] != 0 && visited1[j] != 1 && visit1[j] != 1)
        {
            visit1[j] = 1;
            stk[top] = j;
                top++;
        }
        v = stk[--top];
        cout << v << " ";
        k++;
        visit1[v] = 0;
        visited1[v] = 1;
        }

        return 0;
}
```


DSA LAB 6.2 - [DSA LAB 6.2.dev] - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 32-bit Release
(globals)
Project Classes
DSA LAB 6
C:\Users\yashraj\OneDrive\Desktop\DSA LAB\DSA LAB 6.2.exe
Enter number of vertices : 3
Enter number of edges : 3
EDGES :
Enter start vertex
1
ENter the end vertex<
2
Enter start vertex
2
ENter the end vertex<
3
Enter start vertex
4
ENter the end vertex<
5
The adjacency matrix of the graph is :
0 0 0
0 0 1
0 1 0
Enter initial vertex : 1
The BFS of the Graph is
1
2 3
Enter initial vertex : 2
The DFS of the Graph is
2
1 2
Process exited after 28.33 seconds with return value 0
= 1)
Compiler
Abort Compl
Shorten compiler paths
- Output Filename: C:\Users\yashraj\OneDrive\Desktop\DSA LAB\DSA LAB 6.2.exe
- Output Size: 1.30391216278076 MiB
- Compilation Time: 2.81s
26°C
Sunny
ENG
IN
07:28
22-05-2022