

## EXPERIMENT NO.8.1

### GRAPH TREE:

```
#include<iostream>
#define max 250

using namespace std;
class Graph
{
    int a[max][max],n;

    public:

    void Insert(){
        int i,j;
        cout<<"Enter Number of Vertices:";
        cin>>n;
        cout<<"( 1:Yes AND 0:NO )\n";

        for(i=0;i<n;i++){
            for(j=0;j<n;j++){
                cout<<"Is There Edge Between "<<i+1<<" and "<<j+1<<":";
                cin>>a[i][j];
            }
            cout<<endl;
        }
    }

    void DispEdges(){
        int i,j;
        cout<<"List of Edges : ";
        for(i=0;i<n;i++){
            for(j=0;j<n;j++){
                if(a[i][j]==1)
                    cout<<" "<<i+1<<" , "<<j+1<<" ),\t";
            }
            cout<<endl;
        }
        cout<<endl;
    }

    void menu(){
        int ch;
        do{
```

```

        cout<<"\n*****MENU*****"<<endl
        <<"1.Accept Adj. Matrix."<<endl
        <<"2.Display Edges."<<endl
        <<"3.Exit"<<endl
        <<"\t\tEnter Your Choice :";
        cin>>ch;

        switch(ch){
            case 1:
                Insert();
                break;
            case 2:
                DispEdges();
                break;
            case 3:
                break;
            default:cout<<"Wrong Option \n";
        }
        }while(ch!=3);
    }
}g;

int main()
{
    g.menu();
}

```

OUTPUT:

```
root@mca32-OptiPlex-390: /home/mca32
*****MENU*****
1.Accept Adj. Matrix.
2.Display Edges.
3.Exit
Enter Your Choice :1
Enter Number of Vertices:5
( 1:Yes AND 0:NO )
Is There Edge Between 1 and 1:1
Is There Edge Between 1 and 2:0
Is There Edge Between 1 and 3:1
Is There Edge Between 1 and 4:0
Is There Edge Between 1 and 5:1
Is There Edge Between 2 and 1:1
Is There Edge Between 2 and 2:0
Is There Edge Between 2 and 3:1
Is There Edge Between 2 and 4:0
Is There Edge Between 2 and 5:1
Is There Edge Between 3 and 1:1
Is There Edge Between 3 and 2:0
Is There Edge Between 3 and 3:1
Is There Edge Between 3 and 4:0
Is There Edge Between 3 and 5:0
Is There Edge Between 4 and 1:1
Is There Edge Between 4 and 2:1
Is There Edge Between 4 and 3:0
Is There Edge Between 4 and 4:0
Is There Edge Between 4 and 5:1
Is There Edge Between 5 and 1:1
Is There Edge Between 5 and 2:1
Is There Edge Between 5 and 3:1
Is There Edge Between 5 and 4:0
Is There Edge Between 5 and 5:0
*****MENU*****
1.Accept Adj. Matrix.
2.Display Edges.
```

```
*****MENU*****
1.Accept Adj. Matrix.
2.Display Edges.
3.Exit
Enter Your Choice :2
List of Edges : ( 1 , 1 ), ( 1 , 3 ), ( 1 , 5 ),
( 2 , 1 ), ( 2 , 3 ), ( 2 , 5 ),
( 3 , 1 ), ( 3 , 3 ),
( 4 , 1 ), ( 4 , 2 ), ( 4 , 5 ),
( 5 , 1 ), ( 5 , 2 ), ( 5 , 3 ),
*****MENU*****
1.Accept Adj. Matrix.
2.Display Edges.
3.Exit
Enter Your Choice :3
root@mca32-OptiPlex-390: /home/mca32#
```