姓名:胡樂麒
學號:B1228005
visualize by python
設定:n=8,e=7

out put on terminal

random generated graph:
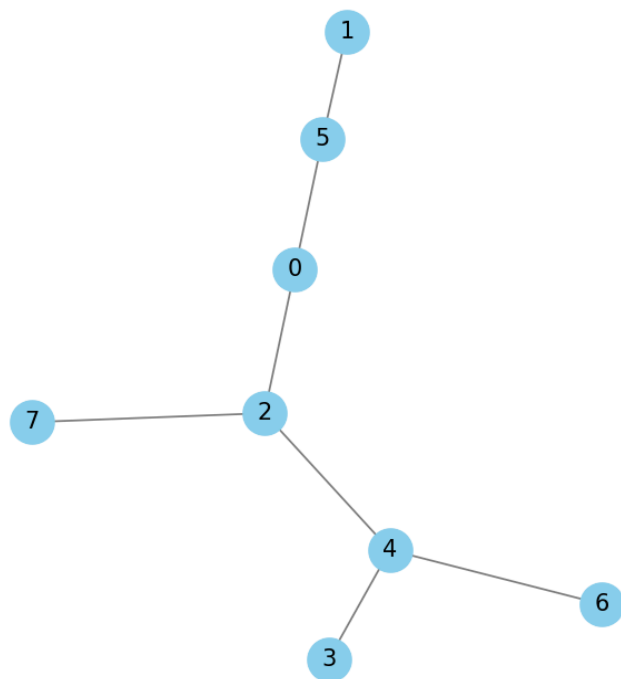
Adjacency Matrix:
```
   0 1 2 3 4 5 6 7
0  0 0 1 0 0 1 0 0
1  0 0 0 0 0 1 0 0
2  1 0 0 0 1 0 0 1
3  0 0 0 0 1 0 0 0
4  0 0 1 1 0 0 1 0
5  1 1 0 0 0 0 0 0
6  0 0 0 0 1 0 0 0
7  0 0 1 0 0 0 0 0
```

Adjacency List:
[0] -> 5 2
[1] -> 5
[2] -> 7 4 0
[3] -> 4
[4] -> 3 2 6
[5] -> 0 1
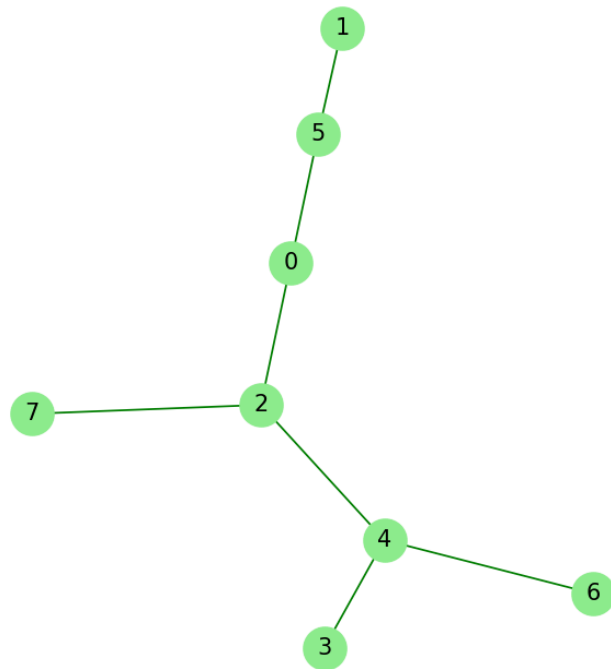[6] -> 4
[7] -> 2

Original Graph

DFS tree:

Adjacency Matrix:
```
   0 1 2 3 4 5 6 7
0  0 0 1 0 0 1 0 0
1  0 0 0 0 0 0 1 0 0
2  1 0 0 0 1 0 0 1
3  0 0 0 0 1 0 0 0
4  0 0 1 1 0 0 1 0
5  1 1 0 0 0 0 0 0
6  0 0 0 0 1 0 0 0
7  0 0 1 0 0 0 0 0
```

Adjacency List:
[0] -> 5 2
[1] -> 5
[2] -> 0 7 4
[3] -> 4
[4] -> 2 3 6
[5] -> 0 1
[6] -> 4
[7] -> 2

DFS Tree

BFS tree:

Adjacency Matrix:

```
   0 1 2 3 4 5 6 7
0  0 0 1 0 0 1 0 0
1  0 0 0 0 0 1 0 0
2  1 0 0 0 1 0 0 1
3  0 0 0 0 1 0 0 0
4  0 0 1 1 0 0 1 0
5  1 1 0 0 0 0 0 0
6  0 0 0 0 1 0 0 0
7  0 0 1 0 0 0 0 0
```

Adjacency List:
[0] -> 5 2
[1] -> 5
[2] -> 0 7 4
[3] -> 4
[4] -> 2 3 6
[5] -> 0 1
[6] -> 4
[7] -> 2

BFS Tree