DFS and BFS

Recursive DFS

```
dfs(vertex v) {
    visit v
    for(each unvisited neighbor u of v) {
        dfs(u)
    }
}
```

Iterative DFS

```
dfs(vertex v) {
    S = new Stack

    visit v
    S.push(v)

    while (stack is not empty) {
        if(all TOS neighbors have been visited) {
            S.pop
        }
        else {
            select u, an unvisited neighbor of TOS
            visit u
            S.push(u)
        }
    }
}
```

Iterative BFS

```
bfs(vertex v){
    Q = new Queue

    visit(v)
    Q.enqueue(v)

    while(queue is not empty) {
        u = Q.dequeue()
        for(each unvisited neighbor w of u){
            visit(w)
            Q.enqueue(w)
        }
    }
}
```