

Project Part 3:

Refactors:

Refactor 1:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/2347f6f7b92f5f2e4d03135995fd17ca8ff4ae1e>

Refactor 2:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/9d56fd30c2556b7b1e7f2be988fa7d7612a0bc8b>

Refactor 3:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/6b82a95cd135dae35d2d785681e24b69fd72220a>

Refactor 4:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/cac5b9bfee0574d6fef274d0679054aa05ec3beb>

Refactor 5:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/0536bee700d855f2b0811201b0c9c616461f9736>

Template/Strategy Methods for BFS, DFS, and Random Walk

Template:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/f92e36350c0e0202f151d26fc7ab34d35cccbfdf>

Strategy:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/62a4e7032aff38dfa3e85166521c924dafc067c7>

Random Walk Implementation:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/b1235b51c2bf7c5173778040d6656c1e8acc74bd>

Screenshots for BFS, DFS, Random Walk Output:

BFS Output:

```
==== BFS a -> h ===
a -> e -> f -> h
```

```
==== DFS a -> h ===  
a -> e -> f -> h
```

## DFS Output:

## Random Walk Output (Should run 5 Times)

```
Run #1
visiting a
visiting a -> e
visiting a -> e -> g
visiting a -> e -> g -> h
a -> e -> g -> h

Run #2
visiting a
visiting a -> e
visiting a -> e -> f
visiting a -> e -> f -> h
a -> e -> f -> h
```

```
Run #3
visiting a
visiting a -> b
visiting a -> b -> c
visiting a -> b -> c -> d
visiting a -> b -> c -> d -> a
visiting a -> b -> c -> d -> a -> b
visiting a -> b -> c -> d -> a -> b -> c
visiting a -> b -> c -> d -> a -> b -> c -> d
visiting a -> b -> c -> d -> a -> b -> c -> d -> a
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c -> d
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c -> d -> a
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c -> d -> a -> b
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c
visiting a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c -> d -> a -> b -> c -> d
```

```
Run #4
visiting a
visiting a -> b
visiting a -> b -> c
visiting a -> b -> c -> d
visiting a -> b -> c -> d -> a
visiting a -> b -> c -> d -> a -> e
visiting a -> b -> c -> d -> a -> e -> g
visiting a -> b -> c -> d -> a -> e -> g -> h
a -> e -> g -> h
Run #5
visiting a
visiting a -> b
visiting a -> b -> c
visiting a -> b -> c -> d
visiting a -> b -> c -> d -> a
visiting a -> b -> c -> d -> a -> e
visiting a -> b -> c -> d -> a -> e -> g
visiting a -> b -> c -> d -> a -> e -> g -> h
a -> e -> g -> h
```

How to Run BFS, DFS, RandomWalk:

To compile: mvn clean package

To run: java -jar target/CSE-464-2025-cminkus-1.0.0-jar-with-dependencies.jar  
examples/demo.dot

You will get the jar from mvn clean package. If you cannot find it, use “dir target” to find the jar!

TA Merge Request:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/f3c593abdcfdc6e1be91c9c11901464f0376e367>

Final Merge Commit:

<https://github.com/cminkus/CSE-464-2025-cminkus/commit/83fd41388191c2f435d8b5a4cccd81a72936a38f>