CSE464 Course Project

Building the Project

To build the project, run the following command in the project root directory:

```
mvn package
```

This command will compile the code, run the tests, and create a JAR file in the `target` directory.

Running the Project

After building the project, you can run the `Main` class using the following command:

```
java -cp target/CSE464-2023-syadav42-1.0-SNAPSHOT.jar Main
```

Features and Usage

1. Parse a DOT graph file

```
GraphManager manager = new GraphManager();

manager.parseGraph("path/to/your/input.dot");

System.out.println(manager.toString());
```

2. Add nodes

```
manager.addNode("NewNode");

manager.addNodes(new String[]{"Node1", "Node2", "Node3"});
```

3. Add edges

```
manager.addEdge("Node1", "Node2");
```

4. Output to DOT file and PNG

```
manager.outputDOTGraph("path/to/output.dot");
manager.outputGraphics("path/to/output.png", "png");
```

Running Tests

To run the tests, use the following command:

```
mvn test
```

GitHub Commits

- Feature 1 (Parse Graph): https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/6864b69c6fa51dcfd7ef4598b6bc5cac67fdde6d (https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/6864b69c6fa51dcfd7ef4598b6bc5cac67fdde6d)
- Feature 2 (Add Nodes): https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/c75c667bb9b83adebc6025f6f72e8a6fe96753ff (https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/c75c667bb9b83adebc6025f6f72e8a6fe96753ff)
- Feature 3 (Add Edges): https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/86ce05d49ef704968baabd443a605c1d84879ed1 (https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/86ce05d49ef704968baabd443a605c1d84879ed1)
- Feature 4 (Output Graph): https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/29c02e67cb34e89810a41d813f69a65061f42bab (https://github.com/satyalyadav/CSE-464-2024-syadav42/commit/29c02e67cb34e89810a41d813f69a65061f42bab)