

### ----- Command to Compile Program -----

To compile the program, open your terminal and navigate to the directory where the project files are located. Use the following command to compile the program:

```
javac homework1.java
```

This assumes that you have Java Development Kit (JDK) installed on your system.

### ----- Command to Run the Program -----

Once the program is successfully compiled, you can execute it with the following command:

```
java homework1 <algorithm_name> <input_file>
```

Please make sure to run the program from the same directory where the compiled .class and input files are located.

algorithm\_name can take one of the following values:

- dfs: For running the Depth-first search algorithm.
- ids: For running the Iterative deepening search algorithm.
- astar1: For running the A\* algorithm with heuristic 1.
- astar2: For running the A\* algorithm with heuristic 2.

input\_file: File containing the space separated input state and goal state. For example:

6 7 1 8 2 \* 5 4 3