

Introduction to Artificial Intelligence, Winter Term 2021
Project 1
Submission Guidelines

Due: November 29th

1. Important Announcements:

• **Illegal Moves:**

- Any action that would result in Neo being in the same cell as an agent. This could manifest in different situations. A few of them are as follows:

- * Going to a cell that has an agent.
- * Also, going to a cell with a living hostage with damage of 98 or 99. In this case the instant Neo enters the cell the hostage will become an agent. For instance, the action “left” in the below example is illegal.

| | | |
|---|--------|-----|
| | H (98) | Neo |
| P | A | TB |

- * Moreover, there are cases where Neo would be in a cell with a living hostage but if Neo did certain actions the hostage would become an agent. For instance, consider the following example.

| | | |
|---|--------|-----|
| | | |
| A | H (97) | Neo |
| P | A | TB |

Neo can perform a “left” action as now Neo would be in a cell with a living hostage resulting in the below state.

| | | |
|---|------------|----|
| | | |
| A | H (99) Neo | |
| P | A | TB |

Now however, if Neo performs a “kill” action it will result in the hostage in the same cell as Neo to die. In this case, the kill action would be illegal.

- Neo performing a drop when Neo is not at the telephone booth or when Neo is at the telephone booth but Neo is not carrying any hostages.
- Neo performing a carry when Neo is in a cell with no living hostages or Neo is in a cell with a living hostage but Neo is already carrying the maximum capacity.
- Neo performing a kill when there are no agents in neighboring cells.
- Neo taking a pill when Neo is in a cell that does not contain a pill.
- Neo flying when Neo is in a cell that does not contain a pad.

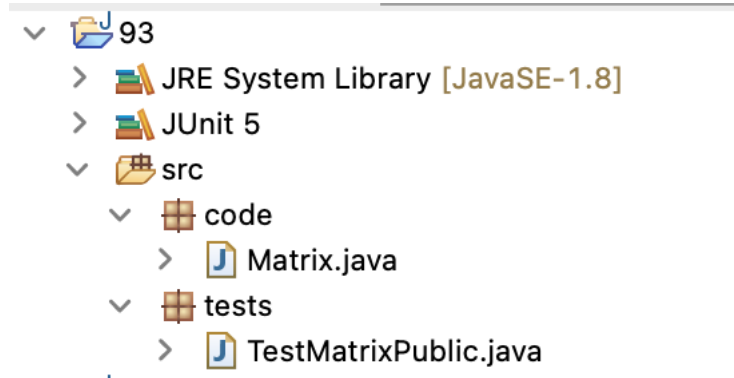


Abbildung 1: Example Project Structure.

- Assume Pad_1 lets Neo fly to Pad_2 and vice versa. Moreover, Pad_3 lets Neo fly to Pad_4 and vice versa. It will be an illegal move if Neo went from Pad_1 to either Pad_3 or Pad_4 and vice versa.

These moves should not be included in a solution and if they are, the solution will be considered wrong.

- You can find the link to the **public test cases** [here](#). Make sure that the public test cases pass within the time limits.

2. Format: You should submit two things. The report (PDF) and the source code. The source code should be a java project named after your team ID. For example, if your team ID is 93, you should name your java project 93. The source code should contain two packages, a package named “code” and a package named “tests”. An example project structure could be found in Figure 1. You can structure your classes into packages or in any other way you want as long as “Matrix” class is in package “code” and the test cases’ file named “TestMatrixPublic” is in package “tests”.

3. Online Submission: You should follow the following [link](#) to submit your project by maximum 23:59 Monday 29/11/2021. Only one member of a team should submit. If your team has multiple submissions only the latest one will be considered.