

COMP3021 PA2 Report

Implemented Bonus Tasks

Bonus 1: Handling `FileNotFoundException` when loading a non-existent map

- Implemented in:
 - `LevelSelectPane::setCallbacks`
 - `GameplayPane::doLoadNextLevel`
 - `GameplayPane::doRestartAction`
- Tested in:
 - `BonusTaskTest::testBonusTask1`
- Procedure to start Bonus Task:
 - Same as specified in PDF

Bonus 2: Automating demo procedure

- Implemented in:
 - `src/test` directory
- Procedure to start Bonus Task:
 - `./gradlew check`

Bonus 3: Reporting deadlock when one crate cannot be moved

- Implemented in:
 - `GameLevel::isDeadlocked`
 - `GameLevel::isCrateOnDestTile`
 - `GameLevel::isCrateMovable`
- Tested in:
 - `BonusTaskTest::testBonusTask3`
- Procedure to start Bonus Task:
 - Same as specified in PDF

Bonus 4: Handling invalid maps when loading maps

- Implemented in:
 - `LevelSelectPane::setCallbacks`
 - `GameplayPane::doLoadNextLevel`
 - `GameplayPane::doRestartAction`
- Tested in:
 - `BonusTaskTest::testBonusTask4`
- Procedure to start Bonus Task:

- Same as specified in PDF

Bonus 5: Implementing Undo feature

- Implemented in:
 - `GameplayPane::setCallbacks`
 - `Map::History` class
 - `Map::getHistory`
- Tested in:
 - `BonusTaskTest::testBonusTask6`
- Procedure to start Bonus Task:
 - Same as specified in PDF

Bonus 7: Update selected level after returning from GameplayPane to LevelSelectPane

- Implemented in:
 - `SceneManager::showLevelSelectMenuScene`
 - `LevelSelectPane::updateHighlightedLevel`
- Tested in:
 - `BonusTaskTest::testBonusTask7`
- Procedure to start Bonus Task:
 - Same as specified in PDF

Other Implemented Features

Gradle

This project uses the Gradle build system to build, test and run the application. Gradle is also used to manage my dependencies, including JetBrains Annotations, JUnit, and TestFX.

Javadocs + Coverage Report

With the Gradle tasks `:javadoc` and `:jacocoTestReport`, Javadocs and a coverage report can be generated.

Test Report

Coverage Report

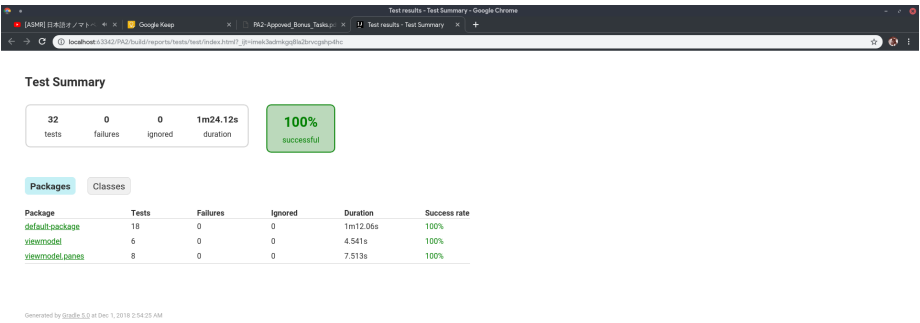


Figure 1: Test Report

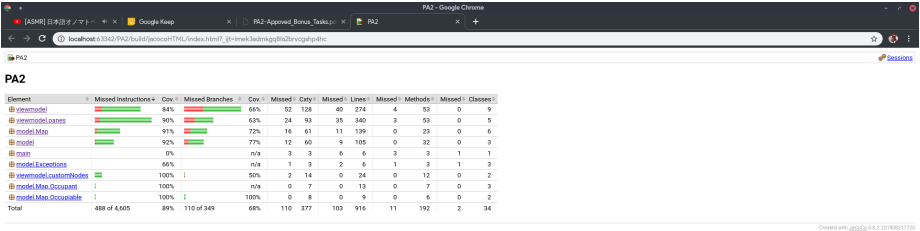


Figure 2: Coverage Report

Auto-Load bundled maps

In `LevelSelectPane::LevelSelectPane`, it is implemented to directly load bundled maps without user intervention, in order to save time looking for the maps during the demo and actual gameplay.