Learning Outcome 5

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Review Criteria

A simple way to ensure that no major errors persist into the production is to make use of the error highlighting features provided by Intellij, which the PizzaDronz system was written using. However, further developers may not wish to use this application, and so good code practice must still be followed. As such, documentation comments were written above each method in the different classes of the PizzaDronz system. These comments explain the different parameters being passed into the method, as well as the general purpose of the method itself. Inline comments were written within the methods in areas where complex chunks of codes occurred. These two kinds of comments provide a sense of maintainability to the code, as other developers do not need to decipher what each part of the code does, and also encourage good practice as the more understandable the code is without comments, the less comments are needed.
When considering how to review the written code and tests, a simple but effective solution is to perform code reviews. Code reviews occur after a developer has written code which then passes pre-defined tests. Once the tests are passed, the developer passes their code on to a secondary reviewer who has not been involved in the creation process until this point. The reviewer will then write a review and give that feedback to the developer, who can then take action based on that feedback.

CI Pipeline

A CI Pipeline was created using Java with Maven GitHub Actions. The pipeline consists of the following three stages:

1. Source Code Management: This is the stage where the source code itself is written in Intellij, and is pushed to a Git repository on GitHub using the Git version control system. When the changes are pushed to the Git repository, the GitHub Workflow action is triggered.

2. Automated Build: For this stage, the Maven build automation tool was used, as it allowed for multiple specified libraries to be accessed. During the build stage, the pipeline builds the project on ubuntu using the Maven tool. If the build succeeds, the pipeline moves on to the next stage.

3. Automated Testing: In this stage, the pipeline runs all of the tests in the testing suites outlined in `LearningOutcome2.pdf` to ensure that any change to the source code does not impact the correct functionality of the system.

Demonstration of the Pipeline

The CI Pipeline can be accessed under the Workflow section of the GitHub repository. Attached below is the view of the CI Pipeline on the GitHub.

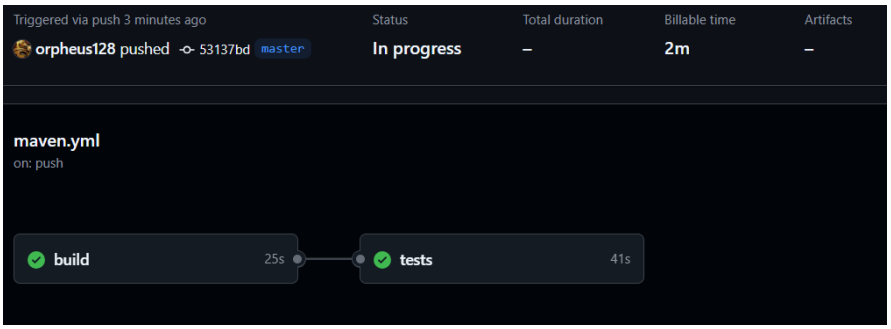

Figure 1: Github Workflow for the CI Pipeline