***Arimaa 2.0***

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Milestone 3

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# Refactoring

The focus of this milestone was refactoring the existing code to improve its quality. Each team member identified and worked on several refactoring opportunities. These are explained at length in the Milestone 3 Refactoring Documentation available in a separate document in our repository (“TeamC-Milestone3-Refactorings.pdf”).

# Testing

After refactoring the code for this milestone, we used our suite of automated unit tests as well as some manual acceptance testing to ensure that all functionality was preserved. Everything went well, but we did have to modify some of the unit tests to accommodate for extracted methods.

One of our goals for this week was to implement custom piece placement at the beginning of the game (hereby referred to as “the new feature”). This is a new feature, so there were no regression tests in place. Unfortunately, we ran into some tricky graphical bugs while implementing this feature, so it is not yet fully functional. When it is completed, a full set of unit tests will be created for it, to serve as regression tests moving forward. It will also be subjected to thorough manual acceptance testing, to ensure the best possible user experience.

For unit testing, we are currently at approximately 91% statement coverage for our non-graphics modules. This is down slightly from the last iteration, due to the incomplete new feature (as previously mentioned). After that is completed and fully tested, we should move back up to > 95% statement coverage.

# Design

The overall design of our software has not changed during this iteration. All of the necessary design hierarchy changes were made in Milestone 2. Most of the refactoring for this iteration focused on refactoring particularly complicated methods and cleaning up existing code.

# Delivery

The master branch is currently ready for delivery, although it is missing the new feature. All previously implemented functionality is present. The refactoring for this milestone didn’t introduce any bugs or adversely affect the quality of the product.

The new feature is being developed in a separate branch in the project’s GitHub repository. This feature is still under development and this branch is not suited for delivery. After implementation is completed and a thorough suite of tests is developed, the new feature will be approved and pushed to the master branch.