Milestone 4 Report

Engicoders
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Testing Implementation

To test our project, our group chose to white box test for each code implementation and black box test any implementations to the web app pages. To start, this project has two forms of white box testing: unit testing and integration testing. Whenever any group member makes any functionality, it has to be accompanied by a test class with unit tests for all possible inputs. This ensures that each function works as the creator intends it to. Along with unit testing everything we write, we have a continuous integration function that runs every test we have written before a pull request can be pulled into our main branch. This is a form of integration testing which ensures that the new code works itself, but also doesn't break previously written code. As for black box testing, this has been recently introduced. We haven't formally utilized black box testing, but whenever new functions have been added to the webpage that users can interact with, the reviewers of the pull request are tasked to test different inputs as if they were a customer and report back to the pull request. Through using the three aforementioned testing techniques, we have been able to fully test all of our code when it's written, before it's implemented, and when it's merged.

In the upcoming weeks, we plan to further black box test our project. This will hopefully prove there are no bugs in our code and if there are, find them and fix them. With all the implemented tests so far, we believe our code is well tested.

Current Functionality

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Automation

Our group has implemented two forms of automation into this project. The first form of automation was implemented early in the project with a continuous integration pipeline. This pipeline started by only checking through the code to ensure there was not any exposed code as well as checking for simple errors in the code. These checks had to pass before anyone could merge their branch into main. This maintained data security for the project, but a more useful continuous integration has been more recently introduced. That integration is an integration test which runs every unit test in the test folder and won't allow merging unless all the tests pass. This automation ensures that any new or altered code won't break what has already been implemented.

Project Summary

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The Process:

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Quality Retention:

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