

Tutorial 2: JUnit and Testing Frameworks

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Testing is not something you have to do exclusively at the end of your project (nor should it be)

Benefits:

- Bug identification
- Quality assurance
- Regression testing
 - Keep automated testing running with every new version
- Increased confidence (in system)

Validation Testing

Ideally, at least one test for every requirement or feature

- When X, does the expected Y happen?

Defect Testing

When someone tries to deliberately break your system, how does it react?

- Y happens when X, but what if we do Z instead?

Testing Frameworks Relevant to Us

Mocha [<https://mochajs.org>] !!!

Jest [<https://jestjs.io>]

Selenium (Web Driver) [<https://www.selenium.dev/>]

When writing test reports/documentation, it will be important to show proof of coverage for automated tests.

GitHub Actions

[<https://docs.github.com/en/actions>]

[<https://docs.github.com/en/actions/automating-builds-and-tests/building-and-testing-nodejs>]

Actions tab in GitHub (action templates) -> Configure

For pytest, this means that all test scripts will run whenever there is a push -> automated testing

Workflow will be “pending”, and will report if it succeeds or not

How much testing is required?

Have as much testing as possible, have testing for each functionality in release planning

100% coverage is not expected

X coverage through automated functions, manual testing of interface also