

Today

- Unit Tests
- Functional Tests
- CI regarding Tests

Unit Tests vs. Functional Tests

- Unit tests tell the developer if the code does things right.
- Functional tests tell developer if the code does the right things.

Unit Tests

- Written from programmers perspective
- Ensure that a specific method performs a specific task

Unit Tests

- There should be a lot of them!
- Use a framework to run all the tests and do this often.

Unit Tests

- Unit tests don't use:
 - A database
 - A server
 - File or network I/O
 - Another application
 - The console
 - Logging
 - Most other classes

Mock

- Used in tests so that they don't use other classes
- Typically overrides the public methods of a production class

Shunt

- Doesn't override all the methods
- Useful to test classes that might connect to a server or that use file I/O
- Your shunt overrides only the methods that use the file I/O

In your project

- If you use the Gravatar pictures
 - Use a mock, so you don't connect to Gravatar
- If you use your own knowledge base
 - It should have mocks, not real instances of eg. Users

Functional Tests

- Written from users perspective
- Confirm that the system does what the user expects it to do

Functional Tests

- Bigger than a unit test, smaller than a component test
- Use more than one class
- Might be a part of a user story

Example

- Reads input from real system input files, pays one or more employees, exports results to real result files, then reads the result files back in and compares individual results to expected values

Functional Tests

- Not as many as there are unit tests
- Can take longer to run them

Continues integration

- Short introduction to CI regarding unit and functional tests

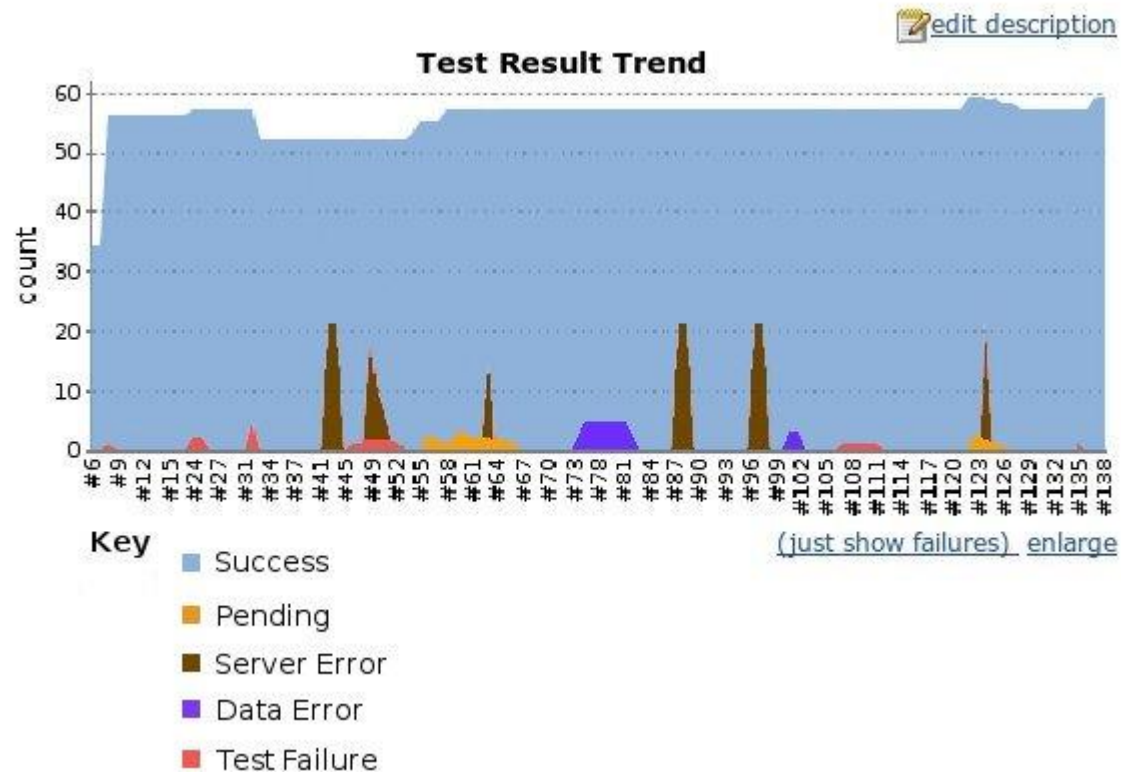
Continuous Integration

- Everytime you want to upload your version you should run all unit tests.
- Everytime you implemented a new feature you make some functional tests.
- Everytime you refactor you run all functional tests & unit tests
 - You spot bugs right away, so you save time!

Hudson

- Runs your tests for every upload
- Informs you if something failed
- Shows you your progress regarding tests
- Can scan your code regarding codeconventions
- Many other features...

Hudson



Questions?