Bratislava #18

Testing your code
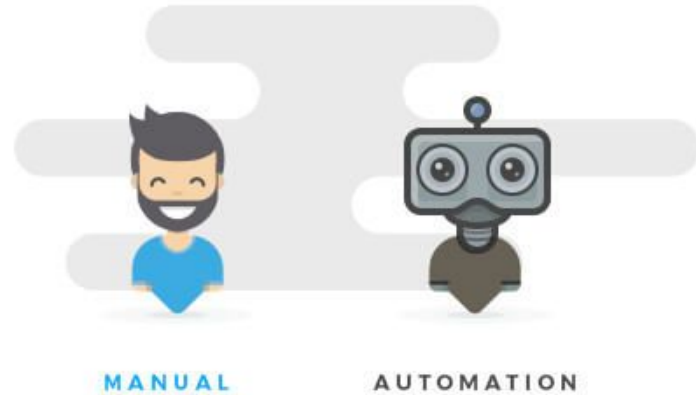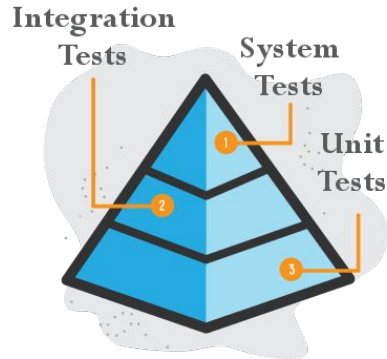
Git recap

1. Install it

2. Create a github account and ask Filipa to add you to the pyladies repo

3. Go to github pyladies repo > https://github.com/pyladies-bratislava/pyladies-bratislava

4. Clone the repository (in your computer)

5. Create a branch and make some changes > `git checkout -b <branch-name>`

6. Commit your changes and write a nice commit message (locally) >

   `git commit -m "Add password generator function"`

7. Push your branch to github > `git push origin <branch-name>`

8. Make a Pull Request to pyladies-bratislava:master (in github using your account)

9. Wait for the review and the merge of your changes.

Types of tests

1. Unit tests
2. Functional/Integration tests
3. System tests

A. Manual tests
B. Automated tests

assert statement

```
assert 1 == 1

assert 3 in [1,2,3,4,5,6]

assert 5 == 6
```

Asserts should be used to test conditions that *should never happen*. The purpose is to crash early in the case of a corrupt program state.

Python test runners

- unittest
    - python built-in since 2.1
    - https://docs.python.org/3/library/unittest.html
- nose2
    - based on unittest (it's unittest with plugins)
    - https://docs.nose2.io/en/latest/
- pytest
    - the best test runner for python imho
    - lots of plugins

Let's test our code

- Pull the latest version of our repository from github
- Go to meetup18
- Make a virtual env with python3
    - python3 -m venv .venv
    - Activate it: source .venv/bin/activate
    - Install the requirements: pip install -r requirements.txt
- and run the tests:
    - With pytest: python -m pytest
    - With unittest: python -m unittest