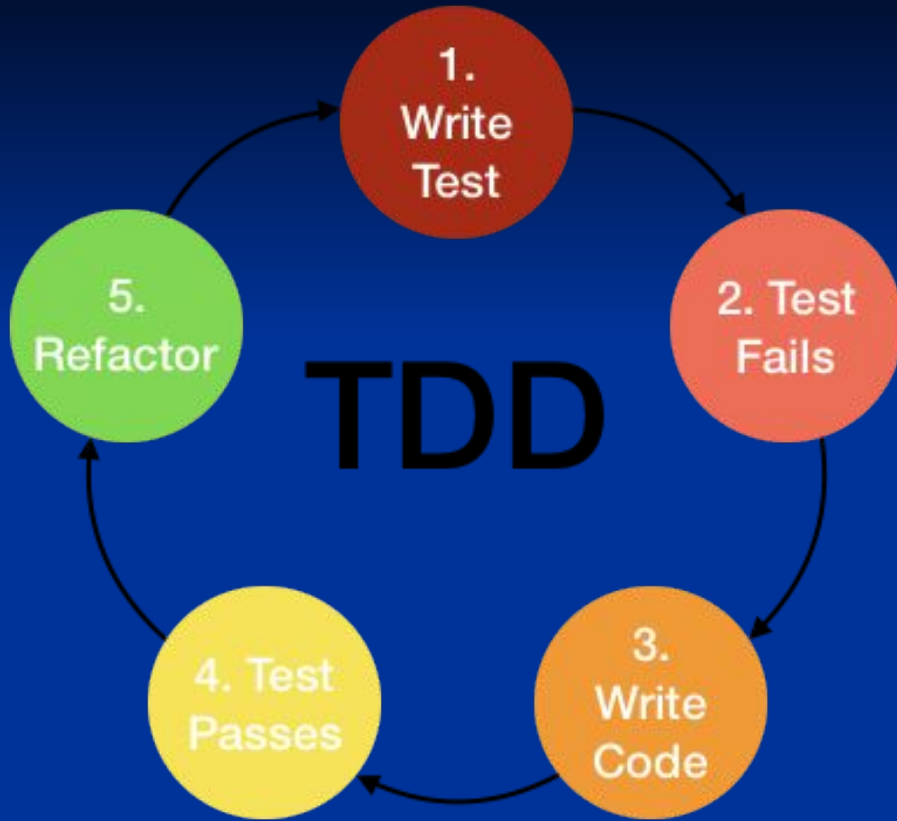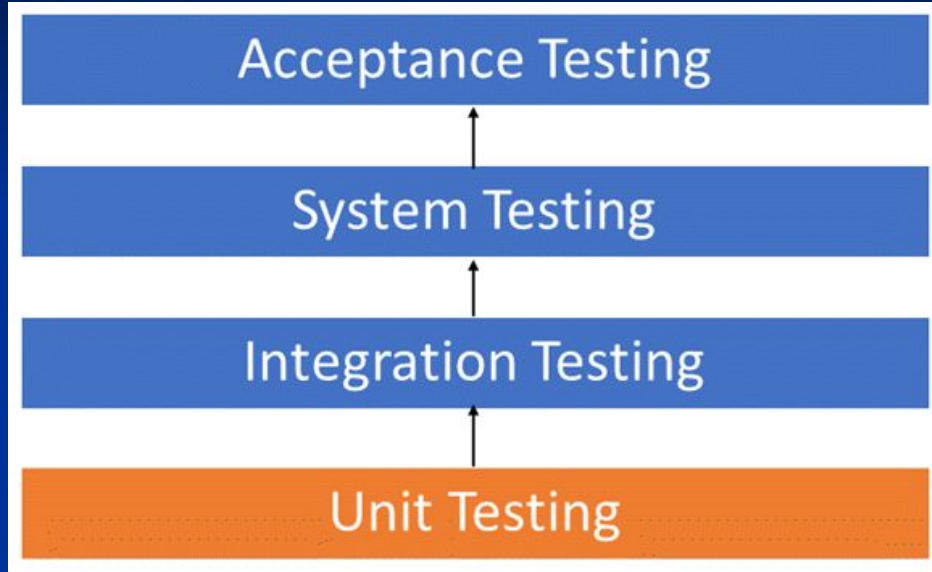# Clean Code 9.

Unit Tests

- TDD → Test Driven Development (1997)

- First: write the test

- Second: write the code accordingly

Unit Test

- Unit: an individual component of a software, a section of an application.

  /function, method, module or object./

- Purpose: validate that the units perform as we expected.

Unit test

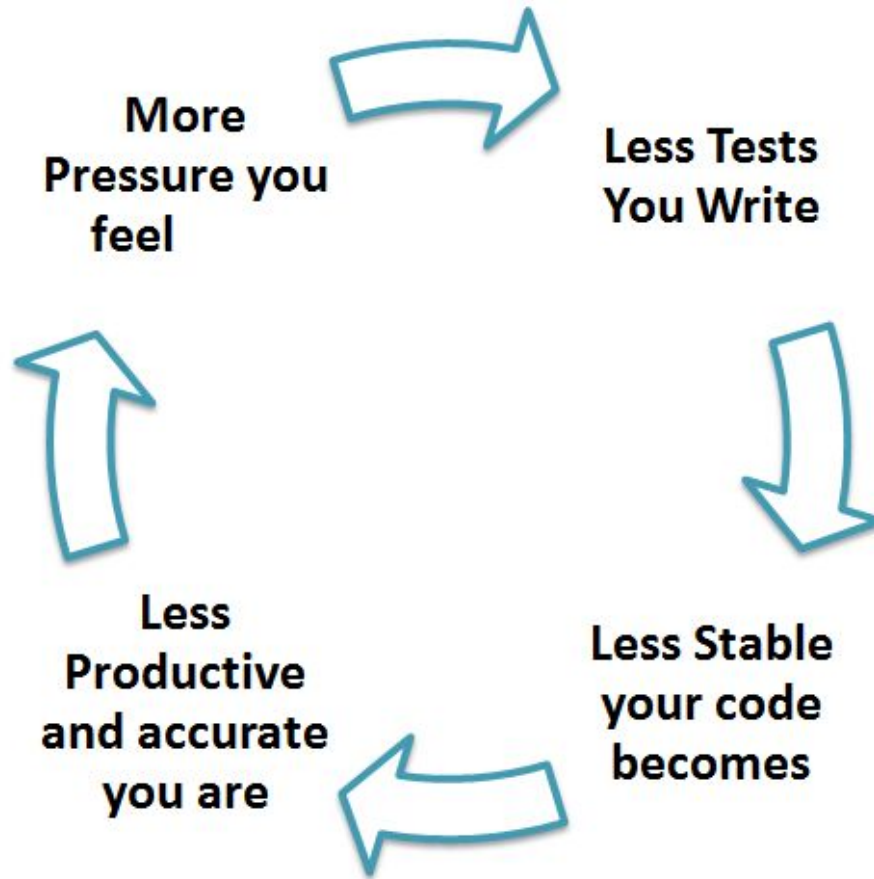| Testing Level |
|---|
| Acceptance Testing |
| System Testing |
| Integration Testing |
| Unit Testing |

- Unit tests are the main basis of testing

- Happens during the coding phase

Advantages of Unit Tests

- Helps to fix bugs early

- Save costs

- The knowledge of the test enables the developers to make changes quickly

Advantages of Unit Tests

- Because of the test strict conditions the code will be cleaner and more understandable

- Helps with re-use the code and the tests → Save time

- Helps refactor the code later and make sure that it still works correctly

- **With Unit test easier to find and fixed the errors**

- **Increase the speed of development.**

Disadvantages

- Takes more time → you have to write more code

- Can not catch every error in a program
→ integration errors or broad system level errors.

F.I.R.S.T

- Clean tests follow five rules:

- F → Fast

- I → Independent

- R → Repeatable

- S → Self-Validating

- T → Timely

Summary