image

Software Testing

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Roles

QA vs QE vs SDET

https://senuri.medium.com/qa-vs-qe-vs-sdet-8dd856f91037

Quality Assurance (QA)

รับผิดชอบคุณภาพของ โปรดักส์ ไม่ว่าจะ manual หรือ automated
โดยเน้นไปที่ automated

Quality Engineer (QE)

รับผิดชอบเหมือน QA และทำ quality plan, แก้โค้ด, ทำ incident reports
รันเทสได้ทุกแบบ รู้จักเครื่องมือทุกอย่างที่ dev ใช้, ทำ CI ได้ และรู้ทิศทางของโปรเจ็ค

Software Development Engineer in Test(SDET)

A.K.A. Software Engineer in Test (SET) and Automation Engineer (AE)

เน้นดูภาพรวมเรื่องการสร้างเครื่องไม้เครื่องมือ, test automation, dev framework
ครอบคลุมทั้ง dev + test สนใจเรื่อง test, robustness, performance

QE/QA/SDET/TESTER/ETC

Types of testing

```
1. Accessibility Testing
2. Acceptance Testing
3. Black Box Testing
4. End to End Testing
5. Functional Testing
6. Interactive Testing
7. Integration Testing
8. Load Testing
9. Non Functional Testing
10. Performance Testing
11. Regression Testing
12. Sanity Testing
13. Security Testing
14. Single User Performance Testing
15. Smoke Testing
16. Stress Testing
17. Unit Testing
18. White Box Testing
```

https://www.perfecto.io/resources/types-of-testing

Another types of testing

https://www.javatpoint.com/types-of-software-testing

image
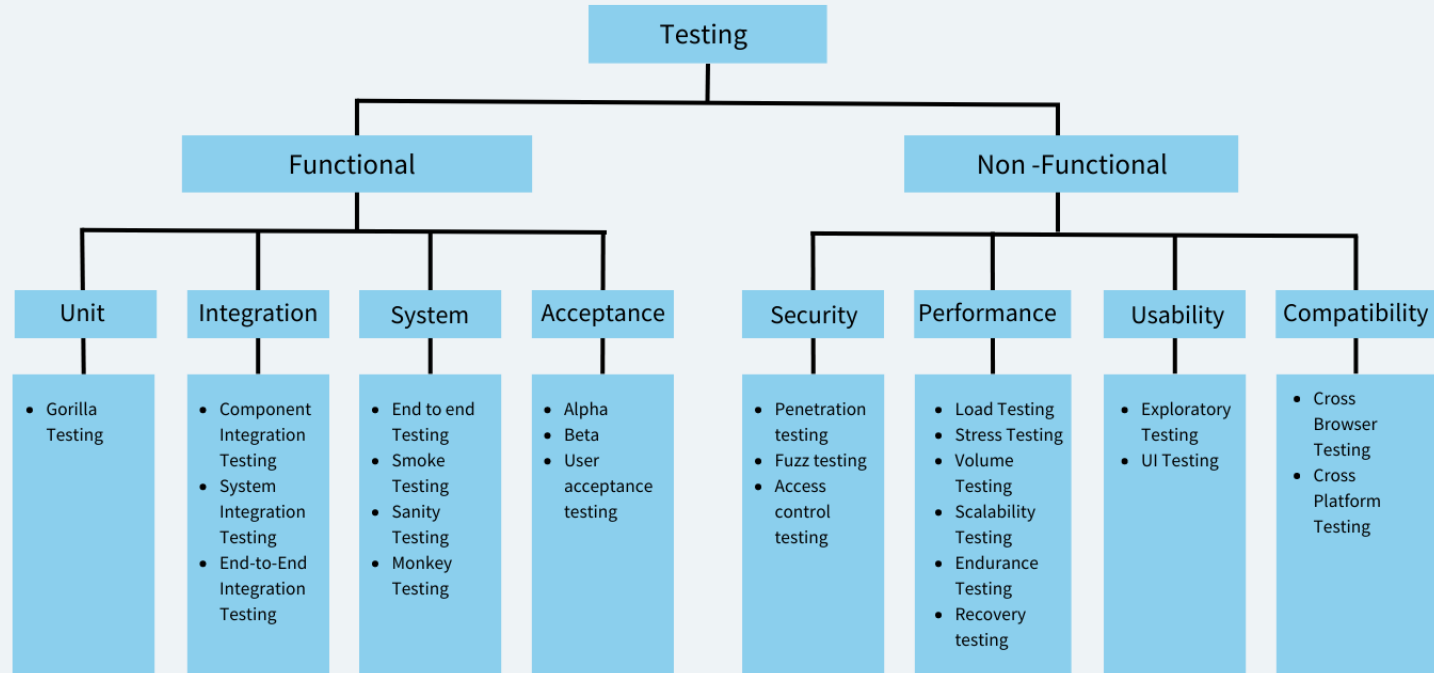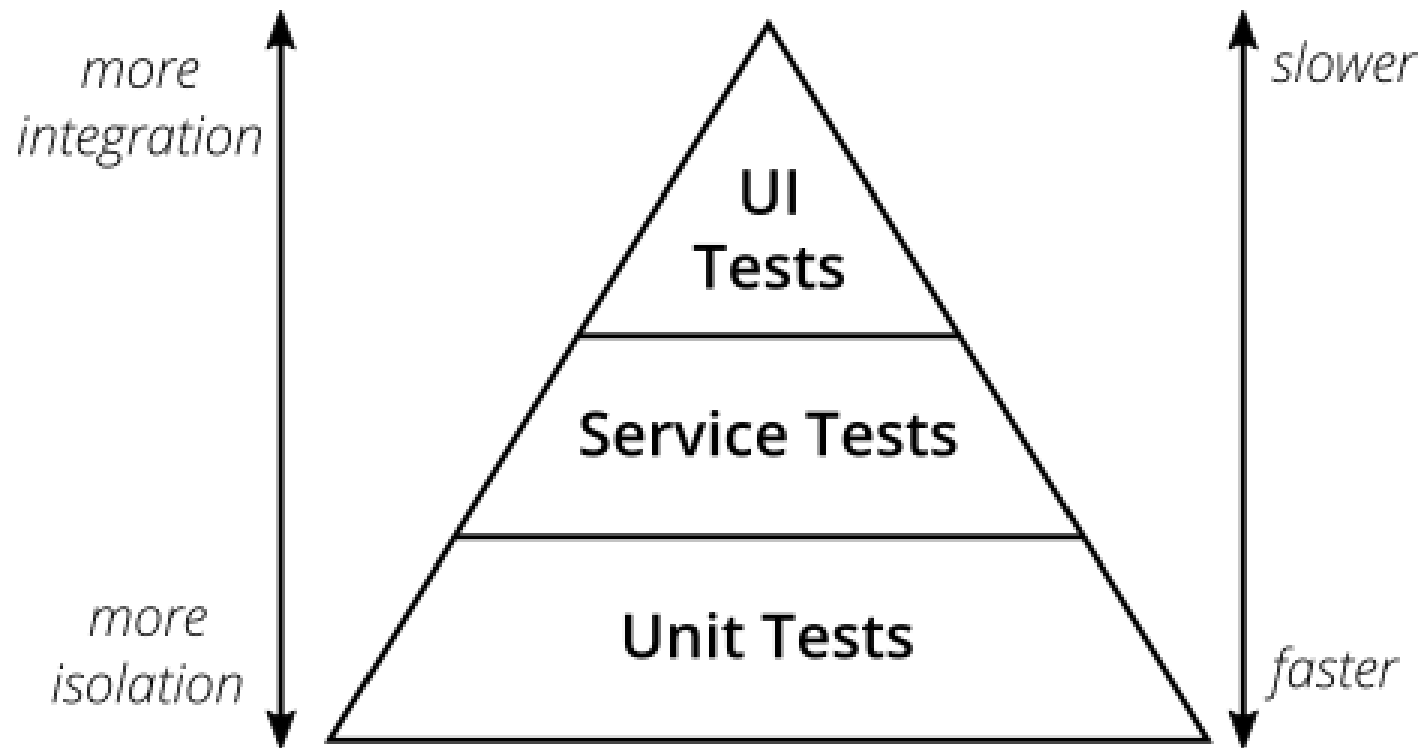
100 types of software testing

https://www.guru99.com/types-of-software-testing.html
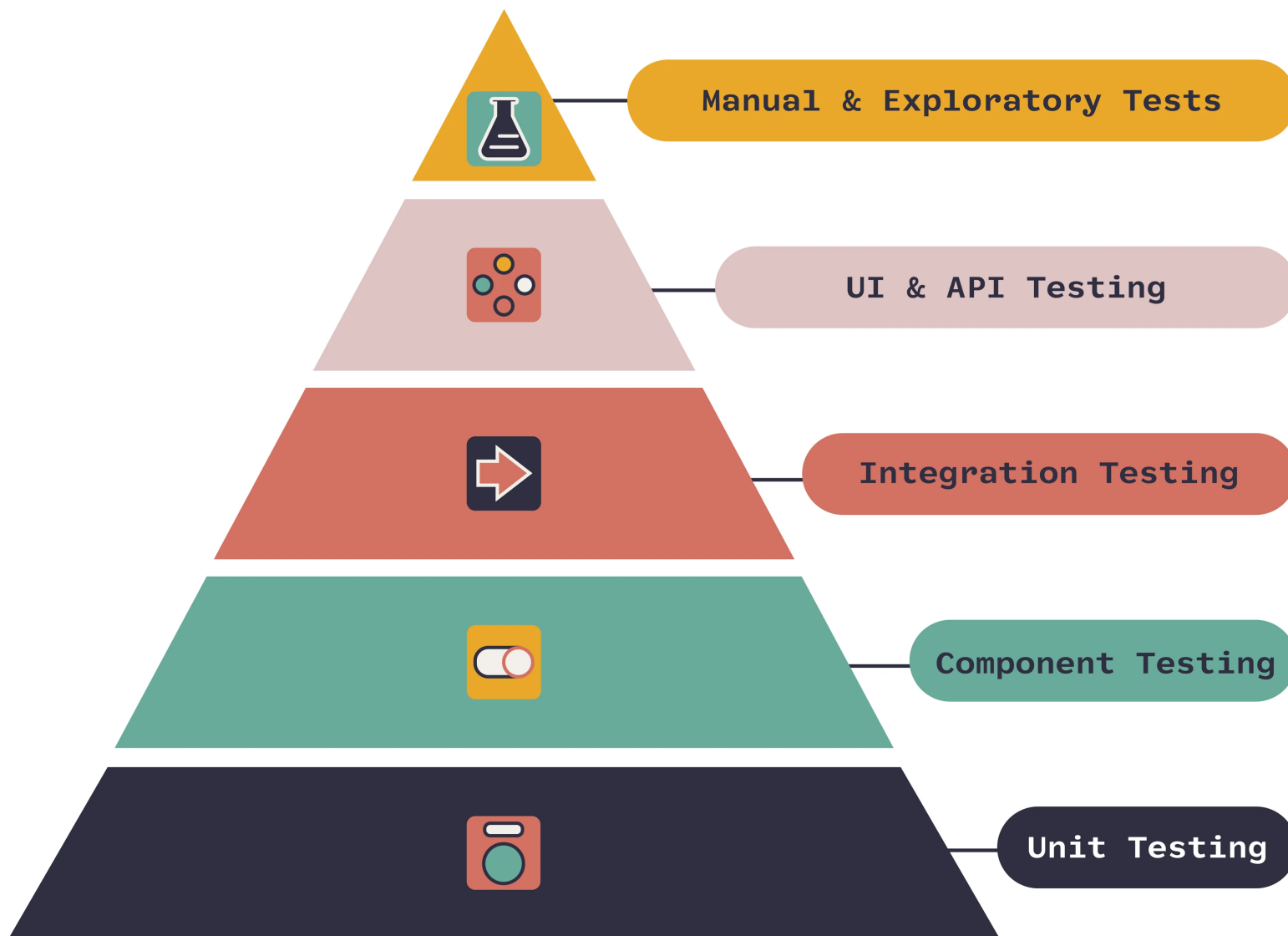
Classification of Different Types of Testing

The Test Pyramid

Test Pyramid

Testing is insurance

image

Automated Test script is Docuement

```
*** Test Cases ***
Valid Login
    Given Login page is open
    When Valid username and password are filled in
    And Credentials are submitted
    Then Welcome page should be open
```

Installations

```
brew install pyenv
pyenv init

pyenv install 3.11.4
pyenv shell 3.11.4

pip3 install robotframework
pip3 install robotframework-seleniumlibrary

brew install --cask chromedriver
```

Example

login.robot

image

Execute

```
robot ./robot/login.robot
```

Given-When-Then style

Given/When/Then/And/But prefixes

Reference

https://robotframework.org/SeleniumLibrary/SeleniumLibrary.html#library-documentation-top

https://robotframework.org/robotframework/latest/RobotFrameworkUserGuide.html#setting-section-1

Convert User Story to Test Case

```
As a user
I want to login
so that I can access the platform
```

Acceptance criteria

```
***Test Cases***
Valid Login
    Given Login page is open
    When Valid username and password are filled in
    And Credentials are submitted
    Then Welcome page should be open
```

ATDD & SBE

Acceptance Test Driven Development

https://less.works/less/technical-excellence/specification-by-example#A-TDDoverview

Specification by Example

http://specificationbyexample.com/

https://www.tutorialspoint.com/behavior_driven_development/bdd_specifications_by_example.htm

A.K.A. BDD,EDD,SDD,...

User Story
    As a user
    I want to see an error message if I enter incorrect login details
    so that I know when my login attempt has failed.

Acceptance criteria
    Given Login page is open
    When Invalid username and password are filled in
    And Credentials are submitted
    Then The error message is shown

```
Acceptance criteria
    Given Login page is open
    When Invalid username and password are filled in
    And Credentials are submitted
    Then The error message is shown


***Test Cases***
Invalid Login
    Given Login page is open
    When Invalid username and password are filled in
    And Credentials are submitted
    Then The error message is shown
```

As an Ariser
I want to add Go to my hard skill matrix
so that anyone can recognize Go as my major skill

Test Cases
Invalid Login
    Given Hard skill page is open
    When I add a new skill
    And I pick Go
    Then Go is included in one of my skills

As an Ariser, I want to adjust my Go skill to the max scale, so that I can show my learning progress

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API

```
pip3 install robotframework-requests
```

api_test.robot