

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)

รับผิดชอบคุณภาพของโปรดัคส์ 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)

เน้นดูภาพรวมเรื่องการสร้างเครื่องมือ, 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

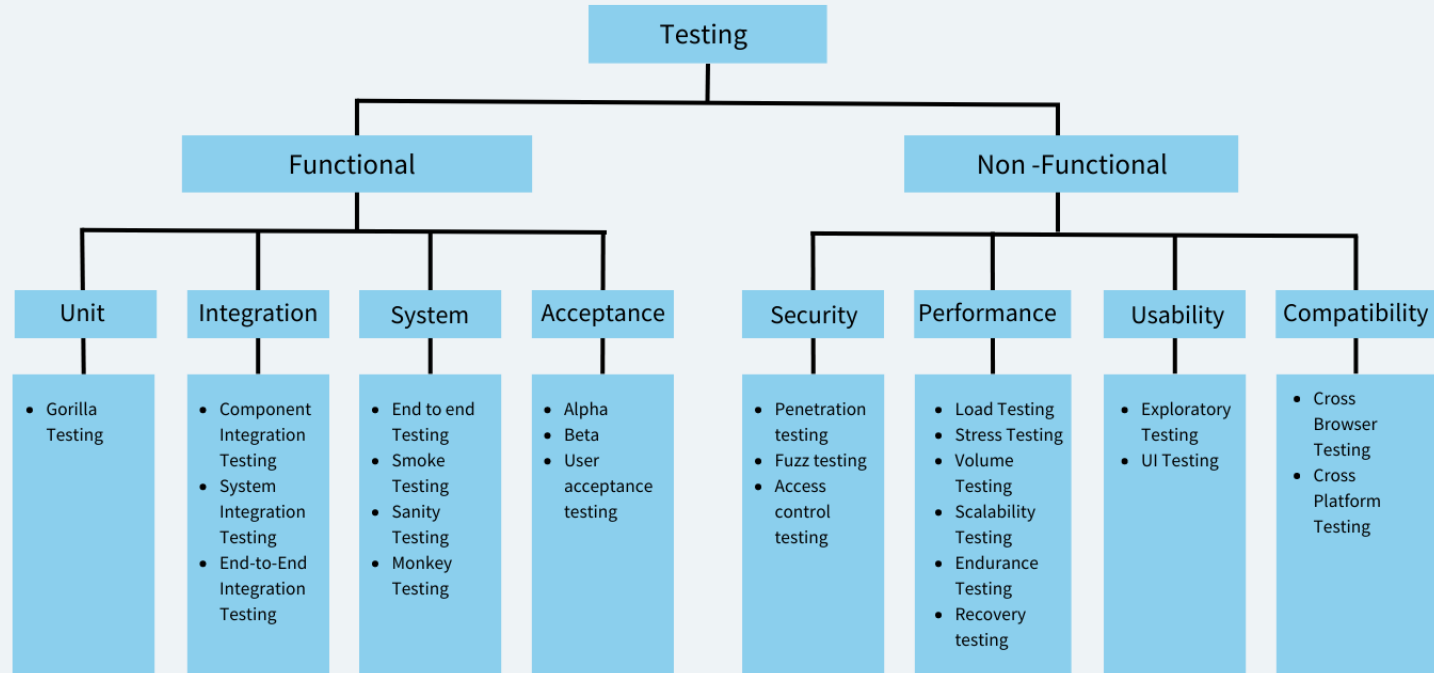
Another types of testing

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

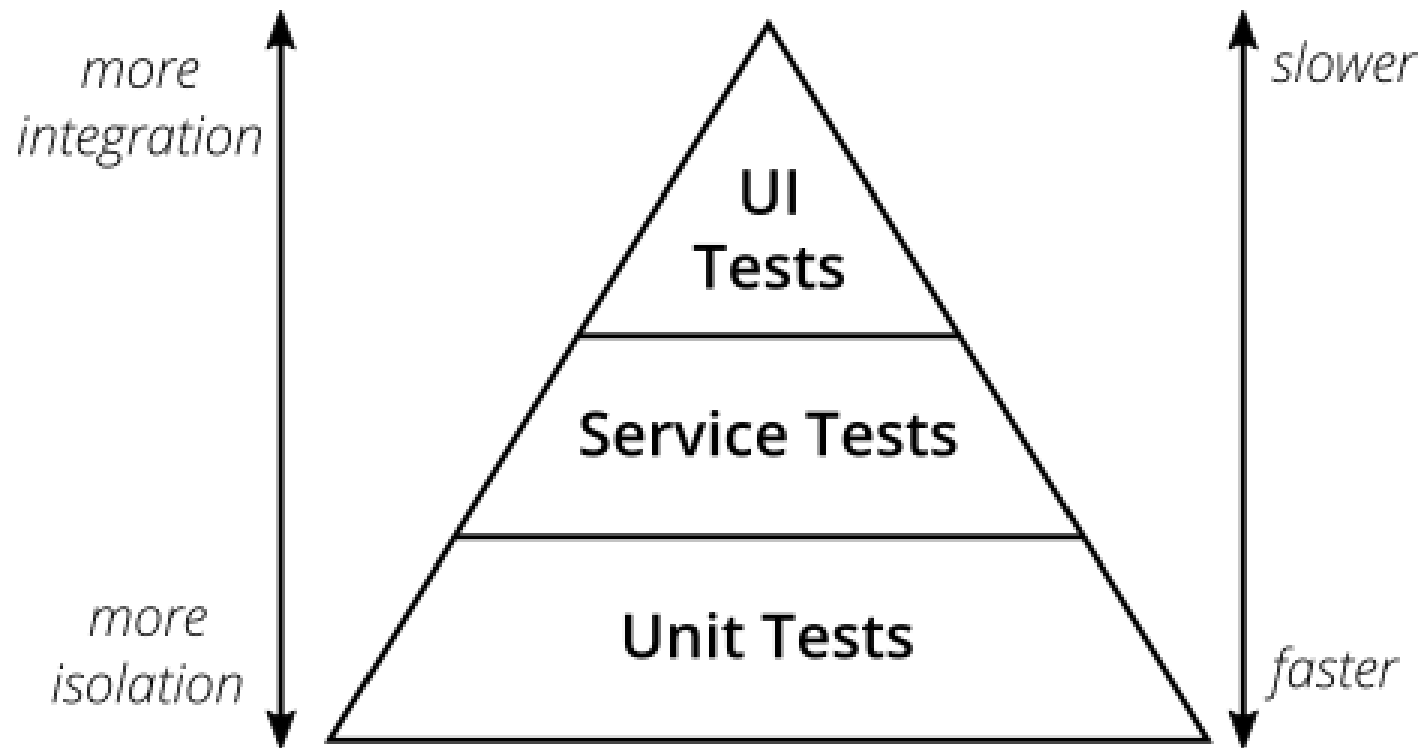
100 types of software testing

<https://www.guru99.com/types-of-software-testing.html>

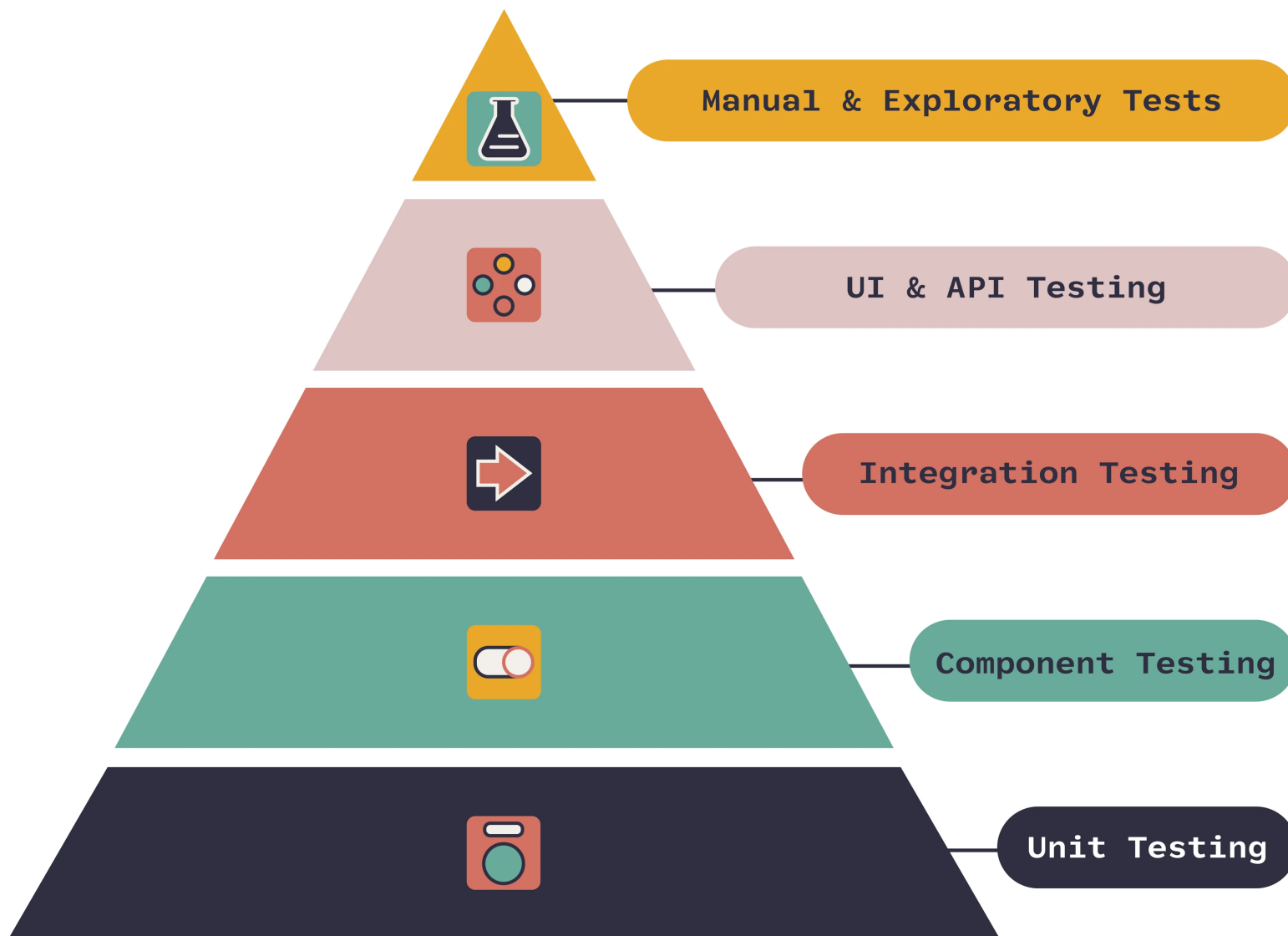
Classification of Different Types of Testing



The Test Pyramid



Test Pyramid



Testing is insurance

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  
pip3 install webdrivermanager  
  
brew install --cask chromedriver
```

Example

login.robot

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

