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Testowanie w praktyce

Volvo Group

Piotr Jakubowski

2023-01-28

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Volvo Group Digital & IT

Volvo Group Digital & IT manages overall digital and IT strategies and plans for the Volvo Group and has the end-to-end responsibility for all development, delivery, and support of IT solutions and services globally.



VOLVO PENTA



VOLVO ENERGY

VOLVO AUTONOMOUS
SOLUTIONSVOLVO FINANCIAL
SERVICES

ARQUUS



MACK TRUCKS



RENAULT TRUCKS



VOLVO TRUCKS

VOLVO CONSTRUCTION
EQUIPMENT

VOLVO BUSES

GROUP TRUCKS
TECHNOLOGYGROUP TRUCKS
OPERATIONSGROUP TRUCKS
PURCHASINGGROUP
PEOPLE & CULTUREGROUP
FINANCE

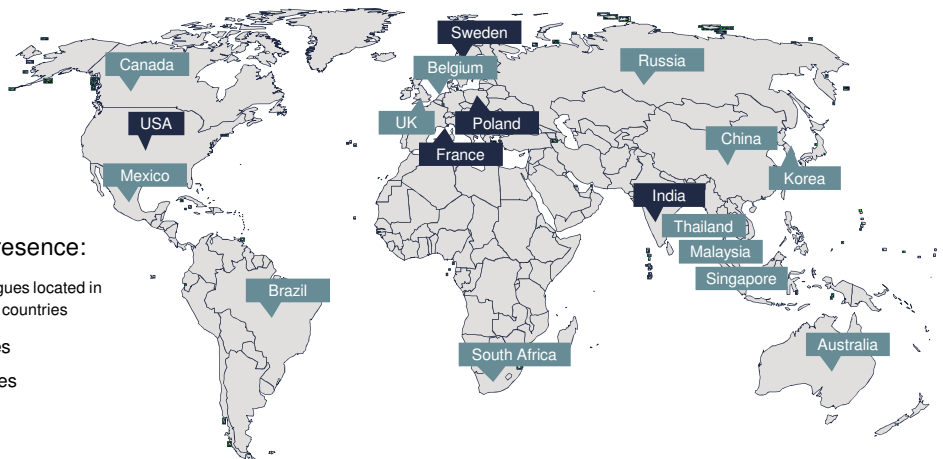
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We are colleagues from around the globe

Global presence:

~4800 colleagues located in more than 30 countries

- Main sites
- Other sites



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Agenda

1. Testing – what is this and why we are doing
2. Software Development Life Cycle
3. Testing Roles
4. Evolution of testing over the years
5. Types of testing
6. Tools
7. Programing language vs automation test
8. Continoues testing
9. Robot framework

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TESTING

What is Testing?


- Series of procedures, processes, and tooling that **facilitates the continuous measurement of product quality** during development

Why we need it ?









- High quality** production required test
- Area** supported by test:
 - Quality** (customer experience)
 - Velocity** (time to market)
 - Flexibility** (sourcing and delivery method)
 - Alignment** (business value and QE org)

What is NOT a Testing

- Testing is not prolonging the development process through extensive software testing cycles to find deviations between expectations and developed software ("The longer you test the better the software").



Value of Testing


Reduced defect leakage 	Test automation is unattended 
Reduction cost 	Speed up product delivery 
Increase in defect yield 	Improvement in year-over-year quality for product 
Reduction cycle time 	Increase in prediction accuracy 

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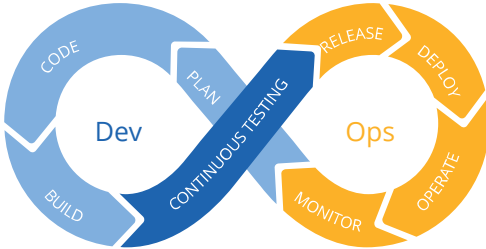
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SOFTWARE DEVELOPMENT LIFE CYCLE

Traditional:
(Waterfall)



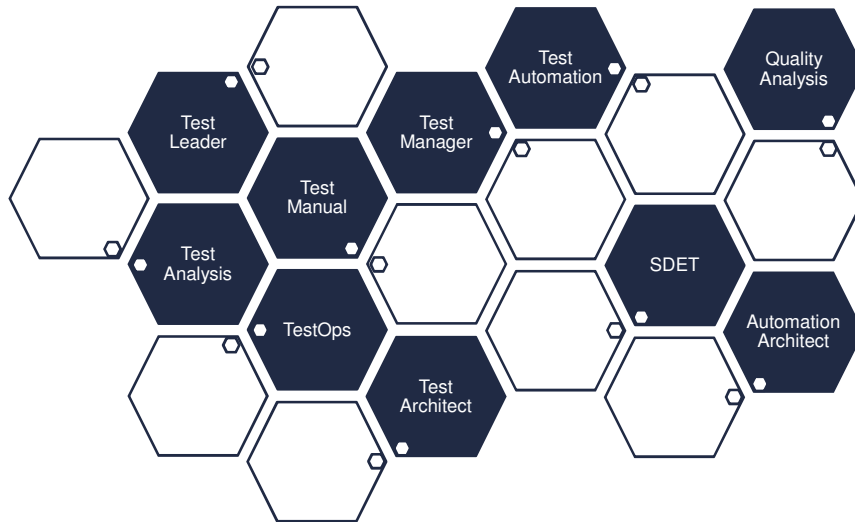
Today:
(Agile and DevOps)



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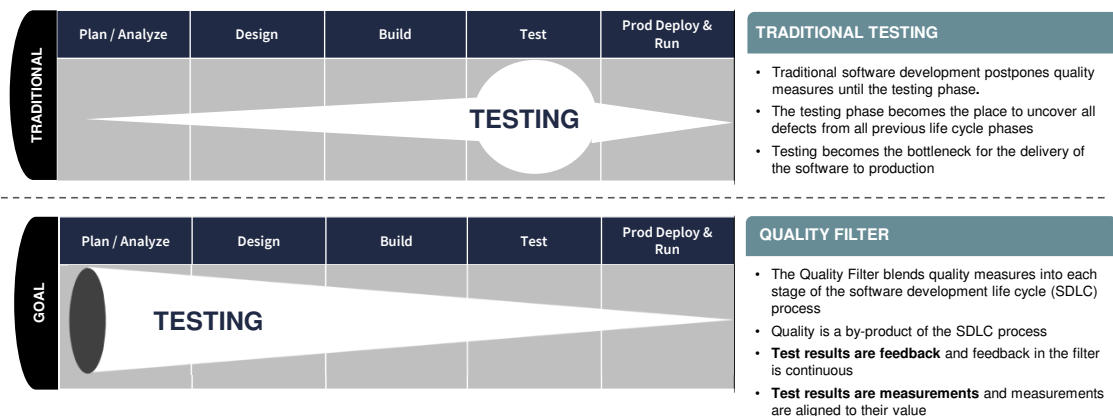
TESTING ROLES

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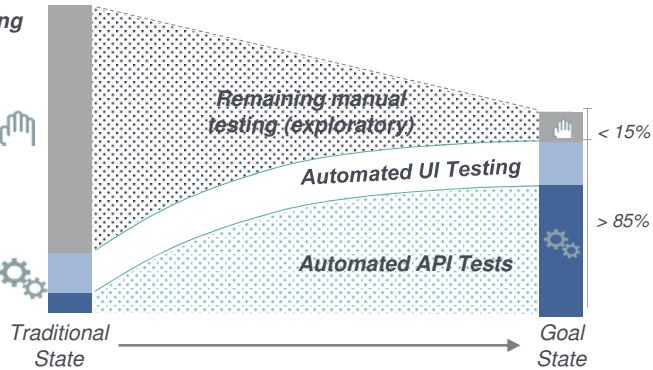
EVOLUTION OF TESTING OVER THE YEARS (PART 1)

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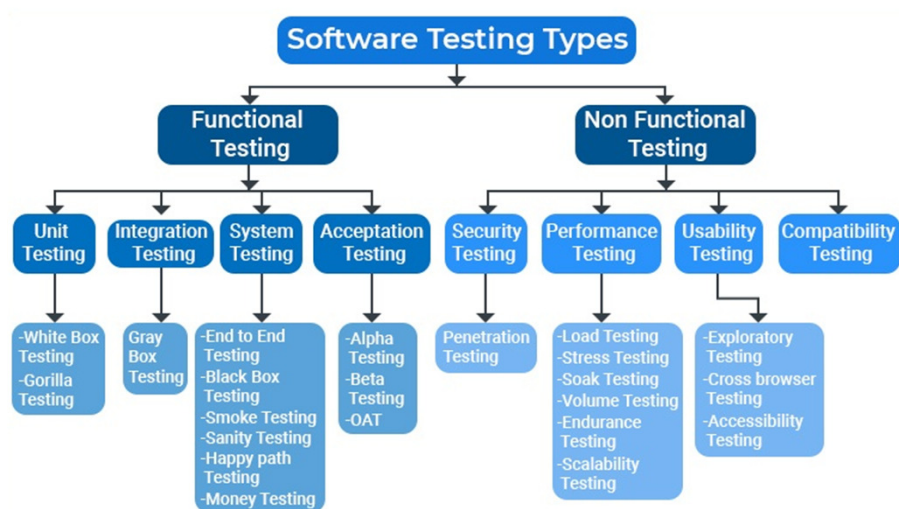
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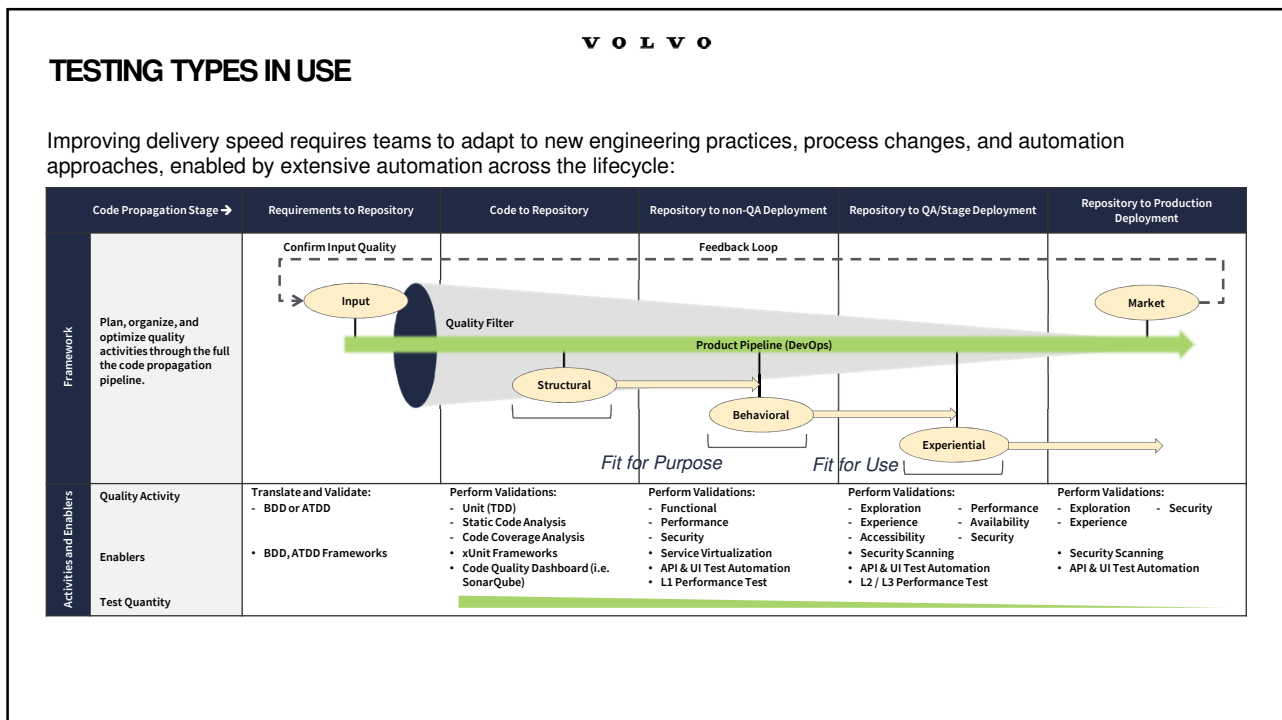
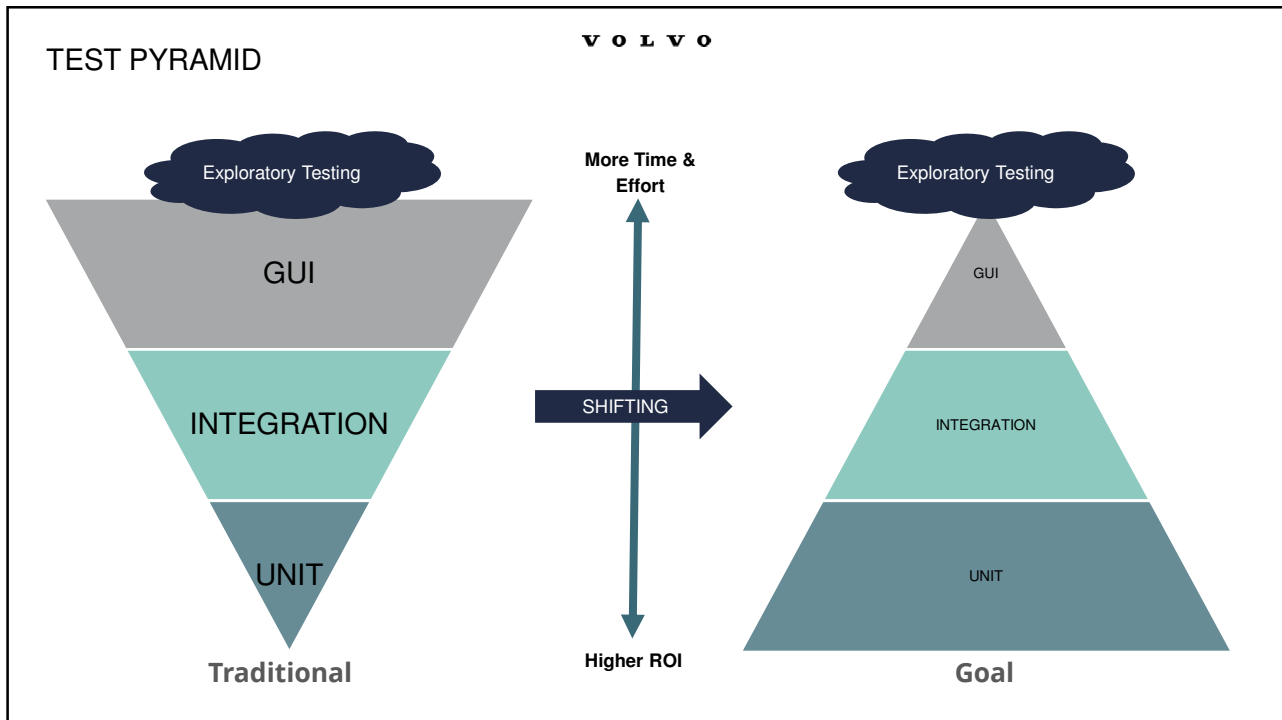
EVOLUTION OF TESTING OVER THE YEARS (PART 2)

Automate First: using the next generation of test automation tools**Total Testing Effort**70 – 80 %
Manual testing20 – 30 %
Automated Testing**Automate Everything:** automate across the testing lifecycle

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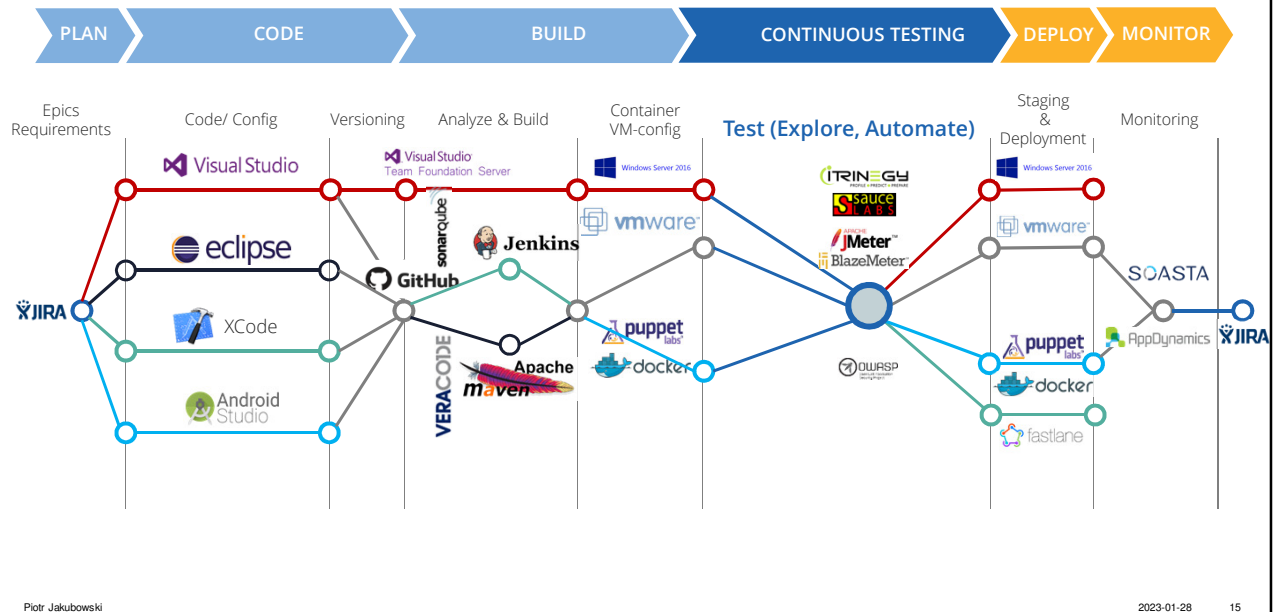
TYPES OF TESTING





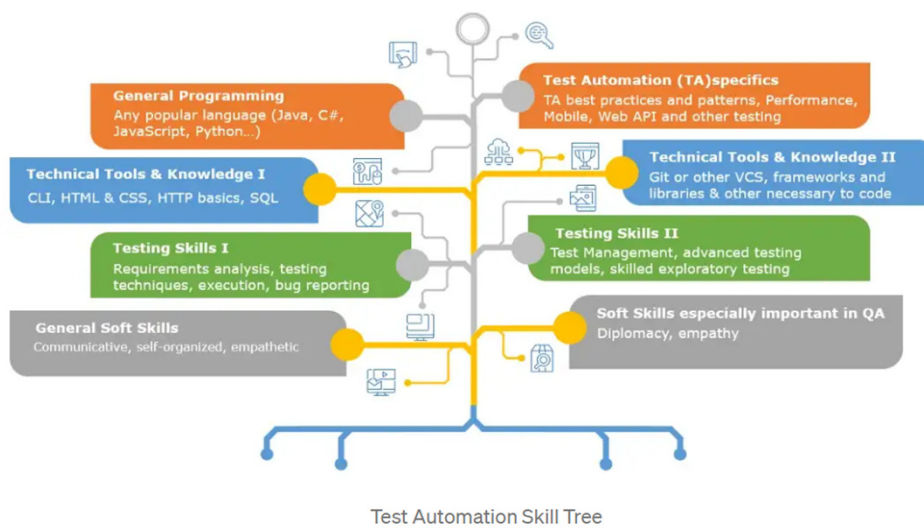
POSSIBLE CONFIGURATION

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PROGRAMING vs AUTOMATION

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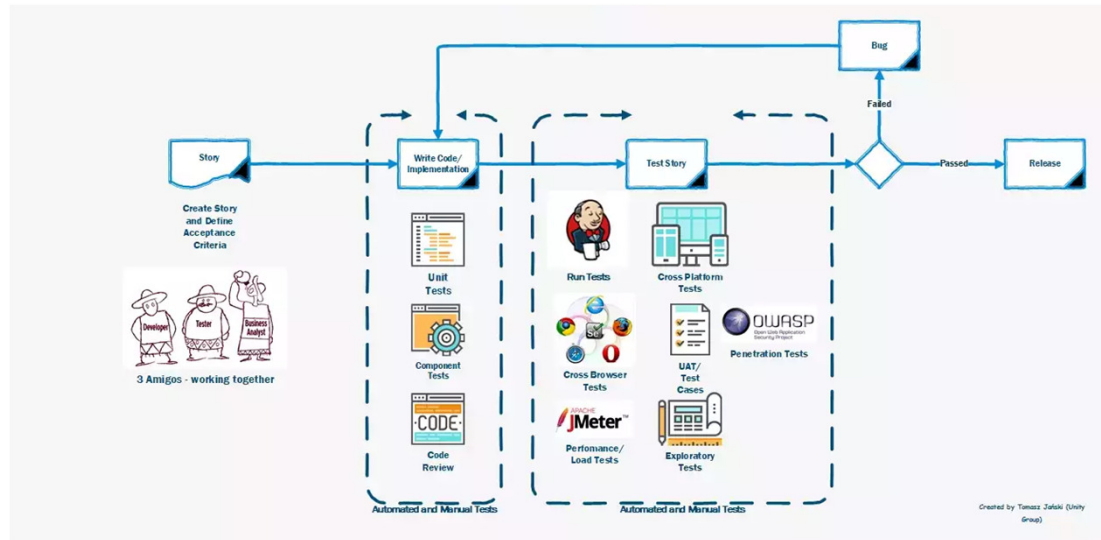


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GENERAL TESTING WORKFLOW



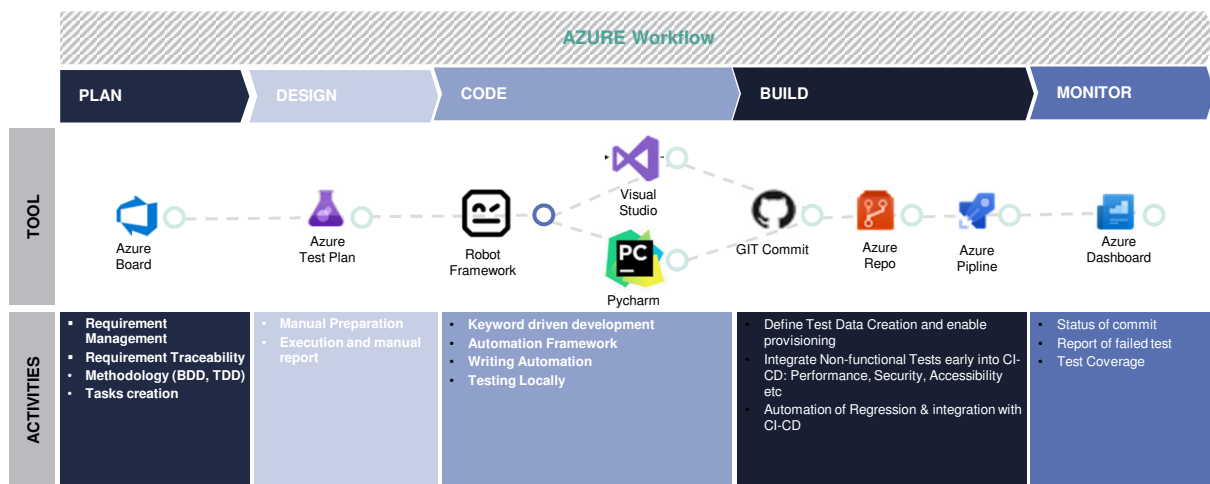
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TEST VIEW IN AZURE



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Robot Framework



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Robot Framework

Robot Framework is a generic open-source automation framework. Robot Framework is open and extensible. Robot Framework can be integrated with virtually any other tool to create powerful and flexible automation solutions. Robot Framework is free to use without licensing costs.

Keyword driven testing

Keyword Driven Testing is a scripting technique that uses data files to contain the keywords related to the application being tested. These keywords describe the set of actions that is required to perform a specific step.

How it works?

1. When a test is run for the first time, the framework parses the test data.
2. It then communicates with the system under test using keywords provided by the test libraries. Libraries can interact with the system either directly or via drivers provided by other test tools.
3. The command line is used to start the test. As a result, you'll receive an HTML report and log as well as an XML output.

Application

- Web, Desktop, Mobile

Data Platform

- ETL, Database

Industry

- Logistic, SAP

Mobile device

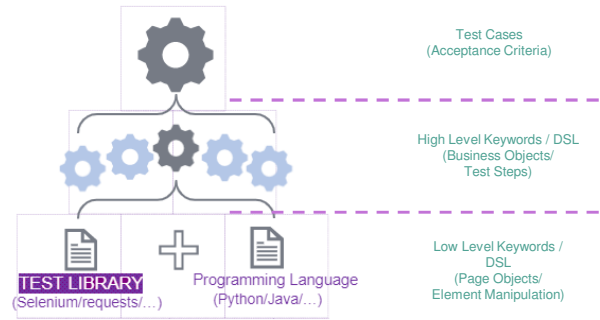
- IOS/Android

Framework

- Selenium, Appium, Playwright

Programming Languages

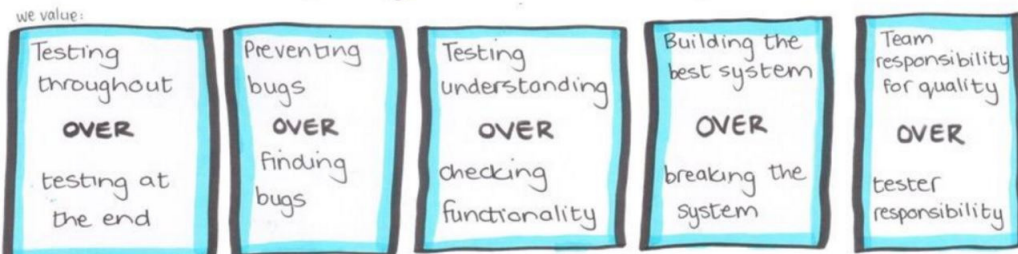
Python, Java, C#, Perl, JS, PHP



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THE TESTING Manifesto



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DRIVE IT – WORK & STUDY – INTERNSHIP PROGRAM



Internship up to **12 months**

Flexible time of working (to be agreed between Intern and Manager/Mentor)



Mentor, Buddy, Cooperation with Senior employee is a great chance to gain new first experience



Possibility of **Home Office**

Laptop and accesories to support daily duties



Work&Study looks for talents and **long-term cooperation**

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Survey

- <https://forms.office.com/r/RaRCNx07bD>



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