08.13May.ContinuesBuildTesting

13 May 2023   04:34 PM

- ➢ Continues Building
- ➢ Continues Testing
    - ○ Automation Testing

Continues Building
- ➢ Tool: Apache Maven
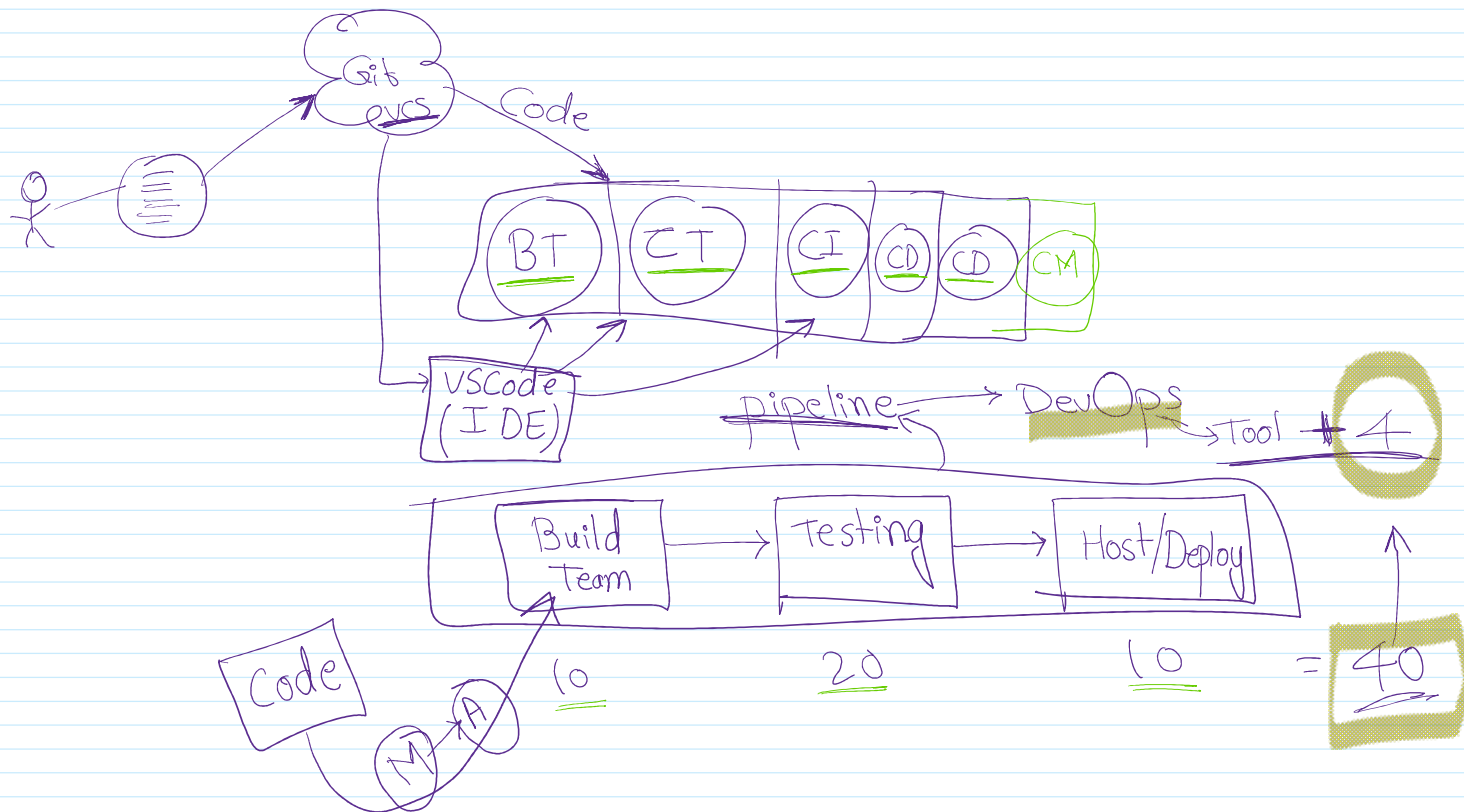- ➢ Framework: Based on Programming Language(.java ---> .class)

Continues Testing
- ➢ Process of executing automated test cases
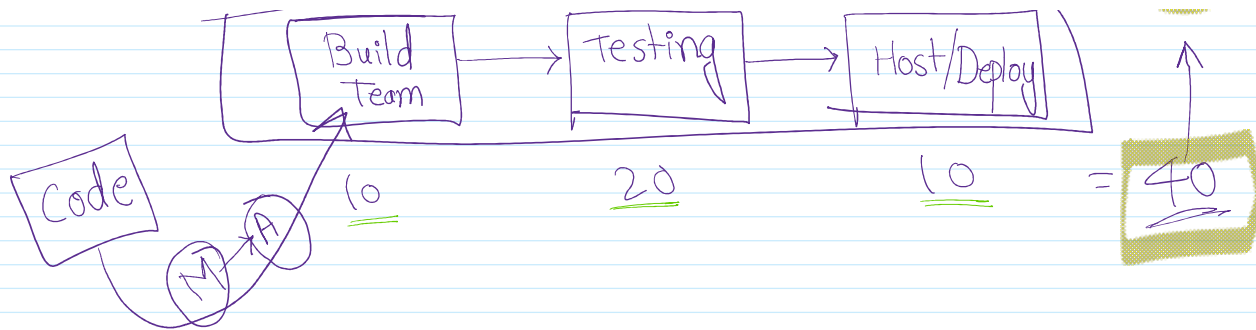- ➢ Application are tested continuously

Project: Calculator App

Programming Language	JAVA
IDE(Integrated Development Environment)	VSCode
Build Tool	Apache Maven
Testing Framework(Continues Testing)	Junit
Manual Testing	Java Program

JAVA:
- ○ JDK - Java **Develop**ment Kit(javac)
- ○ $ apt install openjdk-17-jdk -y
- ○ Install JDK and JRE
- ○ Translator(**javac**): PL/Java/Human Understandable to Computer(Byte Code, Binary Language)
- ○ $ **javac** Calculator.java
- ○ Calculator**.java** --> javac --> Calculator**.class**
- ○ Javac Check
    - ▪ Syntax Errors
- ○ JRE - Java **Run**time Environment (java)
- ○ $ apt install openjdk-17-jre -y
- ○ Install JRE
- ○ $ java Calculator

```
┌──────────┐      ┌─────────┐      ┌────────────┐
│  Build   │ ───> │ Testing │ ───> │ Host/Deploy│
│  Team    │      └─────────┘      └────────────┘
└──────────┘
┌──────┐
│ Code │        10            20              10        = 40
└──────┘
   (M)──(A)
```

Hunting ──→ Farming.

Cycle ──→ Car ──→ Plane

┌──────────────┐
│ BuildReport │
└──────────────┘
        ↑ O/P

Developer/SE
┌──────────┐
│ Source   │ ── I/P ──┐
│ Code   │   │
└──────────┘   ↓
                  ┌────────────┐ O/P   ┌──────────────────────┐
Tester   │ Build Tool │ ─────> │ Deployable Artifact   │
┌──────────┐   │ Maven   │   │ jar, war,   │
│ Test   │ I/P └────────────┘   └──────────────────────┘
│ Cases   │ ───>   │ O/P
└──────────┘   ↓   ┌──────────────────────────┐
                        │   │ project Documentation   │
┌──────────┐ I/P   │   │ (javadoc, UML, docu)   │
│Libraries │ ───>   │   └──────────────────────────┘
Web/Admin └──────────┘ │
                    I/P │
                ┌────────────┐
                │ Config   │
                └────────────┘
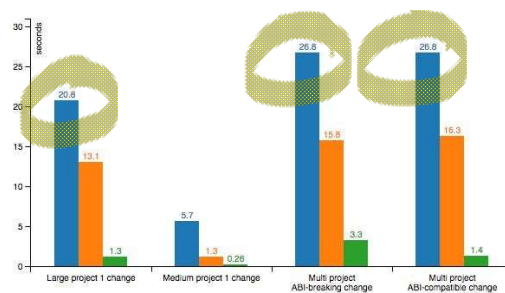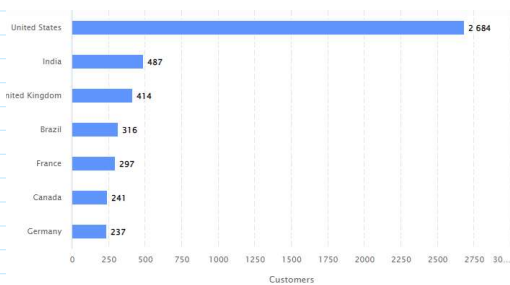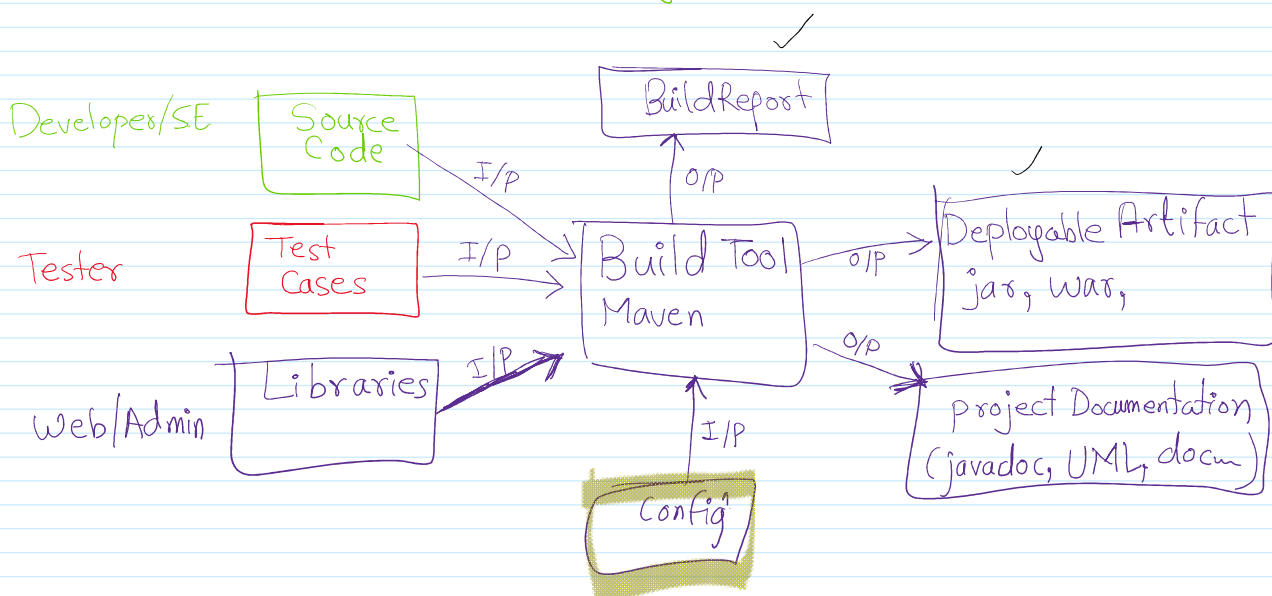
Calculator.java
  ➢ Team: Developer(Software Engineer)
  ➢ Take care of functionality
Add, Subs, Mult, Div

CalculatorTest.java
  ➢ Team: Tester(Software Tester)
  ➢ Checking functionality(Input --> Functionality --> Output(Pass, Fail)
AddTest, Subs, Mult, Div

Ant ──→ Maven ──→ Gradle
V1   Stable   Latest
        V2
```

add() {
...
}

2+2=4  TC1

0+2=2  TC2

Testing Tool/
Frameworks

Test
Suite

| | |
|---|---|
| Selenium | 81% |
| TestNG | 50% |
| appium | 35% |
| Cucumber | 32% |
| JUnit | 25% |
| TestProject | 19% |
| Katalon | 17% |
| cypress.io | 11% |
| nunit | 10% |
| Other | 8% |

JUnit

APP      T. Suite

Assemble

Car parts → | Car | → Test Drive.

Code → Build → Test

O/P → ◯

Build Tool

SRC → Source Code
    → Test Suite (Test Cases)

PM

Pm → ~~src~~ → Test Suite (Test Cases)

target → O/P version

→ Reporting's

.git = github

.vscode = Settings of vscode

mvn clean
- Analyze → Current Project

Suitation → understand

V1 → V2, Lib

- All Running Process → Terminate.
- Delete Old Version. (target)

SLA = Service Level Agreement

Enterprise Based Company → Trust

Compulsory Question → C I/CD

**Lifecycle Goals of Maven**

$ mvn clean

$ mvn compile   ( java --> class ) Files

$ mvn test   ( TestCase.java ---> TestCase.class )
Files

$ cd target/test-classes/

$ java org.junit.runner.JUnitCore CalculatorTest