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Unit 2 – CircleCI + Java Implementation

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Agenda

- **CircleCI**
  - Demo
- **Java**
  - DOM Parser
  - Stax Parser
  - Demo

CircleCI

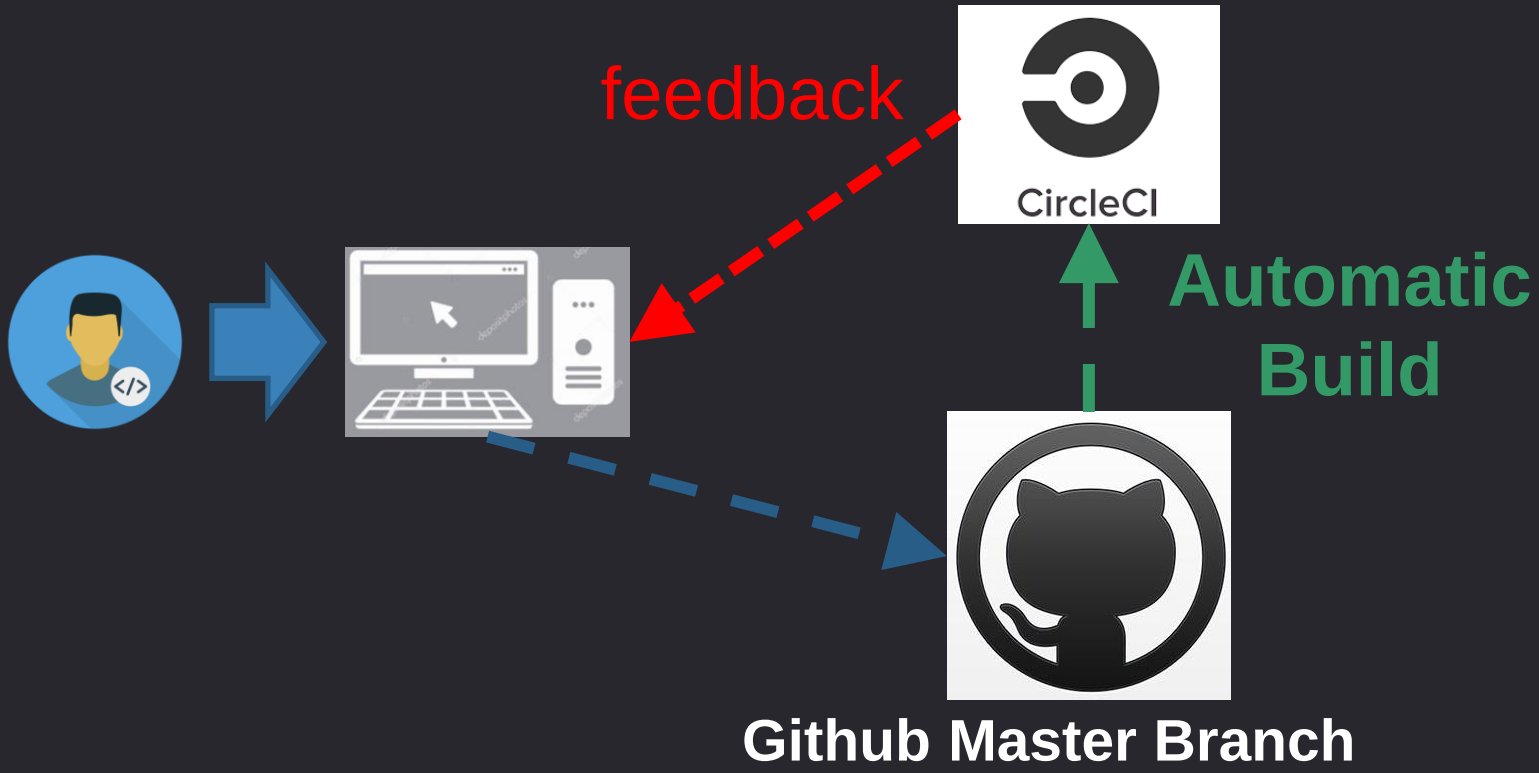
- **Continuous Integration (CI) definition:**

  CI is a software development practice wherein developers regularly merge their code with a central repository after which automated builds and tests are run.

- **This means that CI tools offer the possibility to automatically compile and test the code as soon as it is committed to a repository.**

CircleCI is not a testing tool!

Basic Workflow of CircleCI



CircleCI Config Example

```yaml
version: 2
jobs:
  build:
    working_directory: ~/at.jku.se.prse.example.calculator

    docker:
      - image: circleci/openjdk:8-jdk-browsers

    steps:

      - checkout

      - run: mvn clean verify

      - store_test_results:
          path: /home/circleci/at.jku.se.prse.example.calculator/at.jku.se.prse.example.calculator/target/surefire-reports

      - store_artifacts:
          path: /home/circleci/at.jku.se.prse.example.calculator/at.jku.se.prse.example.calculator/target/
```

Folder in which we are going to install the Docke image

Copy the branch into the folder

Maven run command

CircleCI

- **Demo**
  - https://github.com/jku-win-se/teaching-2021.prse.circleci.example

Java XML Parser

- **DOM Parser**
  - Entire document is read into memory
- **Why Stax?**
  - Small memory footprint and is typically much faster
- **Java Architecture for XML Binding (JAXB)**
  - The ability to *marshal* Java objects into XML and the inverse
  - Works on top of the parser

Java Stax + JAXBContext

- **Demo**
  - https://github.com/jku-win-se/teaching.teaching-2021.prse.xml.parser.example

Bibliography

- **Java + XML**
  - https://www.vogella.com/tutorials/JavaXML/article.html
- **Java + Stax + JAXB**
  - https://www.baeldung.com/java-stax
  - https://www.journaldev.com/1191/java-stax-parser-example-read-xml-file
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