JEE Basics

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# The Theory of Java EE

# What is it?

Collection of abstracs specifications that offer a solution for solving common challenges in the Developer's world

* Abstract Specs
* Commonly Faced Challenges - Persistence, web services, transactions, security, lose coupling, etc.
* Focus is on abstract (Developers can focus on solving the challenge at hand, instead on building usual libraries, that are already in the JEE set)

# What is an Application Server?

* Concrete implementation - application server
* Abstract from detailed implementation
* javax.\* package

Examples of Java EE App Servers

* Payara server (Glassfish) - <https://payara.fish>
* IBM OpenLiberty - <https://openliberty.io>
* JBOSS Wildfly - <http://www.wildfly.org/>

# What is a JSR?

Java Specification Request

* Formal request to Java Community Process (JCP) (a body that standardizes APIs on the Java technology platform.
* (for) New proposal, enhancement to existing APIs eg CDI 1 -> CDI 2 (to the java platform)
* Used to group APIs into silos

Examples:

* <https://jcp.org/en/home/index>
* <https://jcp.org/en/jsr/platform>
* Link for the JEE Requests: <https://jcp.org/en/jsr/platform?listBy=3&listByType=platform>

# Reference Implementation

* Concrete realization of the abstract JSR
* Eg JAX-RS reference implementation - Jersez
* Java EE itself is a JSR!
* Java EE 8 is JSR 366 - RI Glassfish 5

Application server redefinition: Collection of the various reference implementations for the JSRs.

# Jakarta EE

(Bord when Oracle open up the development of JEE to the developers community)

* Java EE going forward
* Hosted by Eclipse Foundation
* https://jakarta.ee

# Java EE and Spring Framework

* Java EE influenced by Spring Framework
* Spring boot influenced by Java EE
* Both good platforms - use what works best and solves your problem
* No flame wars - quite pointless

Spring Framework (more simplified) both frameworks influence each other.

# Software to install

* Apache maven: <https://www.baeldung.com/install-maven-on-windows-linux-mac>
* Insomnia: <https://docs.insomnia.rest/insomnia/install>
* apache netbeans: <https://netbeans.apache.org/>
* git: <https://git-scm.com/downloads>
* payara: <https://www.payara.fish/>

# Helloworld

Dynamic Web App (Netbean Project hello-javaee8)

Deploy a web app using the payara.jar from the command line:

java -jar payara.jar --deploy /Users/lluis.carrasco.martinez-cic@ibm.com/NetBeansProjects/hello-javaee8/target/hello-javaee8.war --port 8080

See the app in the browser:

http://localhost:8080/hello-javaee8/resources/ping