Daily Homework

03/22/2022

Notes and Q&A:

<https://docs.google.com/document/d/1O7ogrWUuttxBATKADPk98zPqyQcgCWbdF18YKx0xcSQ/edit?usp=sharing>

Checklist:

<https://docs.google.com/document/d/1fmYhFHUIy44UIId1fpUUV-vWt9RdjD0ghkv9n5PqzBw/edit?usp=sharing>

1. What have you reviewed today?

Spring and Spring Boot

* What does Spring provide?
  + Application context and dependency injection/IOC
  + Data Access
  + Spring MVC
* IOC/DI
  + Make code loosely coupled
  + Default scope is singleton so that the objects could be reused
  + Injection type: Constructor, Setter, Field
  + Constructor Dependency injection type is recommended but could cause dependency error
* AOP
  + Aspect Oriented Programming entails breaking down a program logic into several distinct parts so-called concerns.

Spring Boot

* Auto-Config
* Embedded Server
  + The web starter comes with Tomcat
* Self-Executable Jar
* Starter
  + Pre-defined dependencies
  + Web starter, security starter, cloud starter, etc…
  + Simplifies the pom file
* Actuator
  + Monitor module for Spring Boot application
  + Build-in metrics, etc.

1. What new things you have learned today?

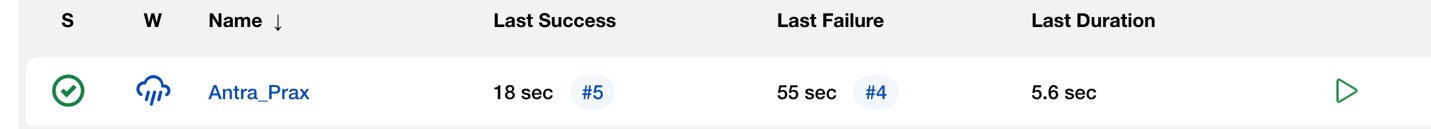
Project Management

* Agile(incremental and iterative practice(sprint))
* Tool: Kanban, jira, etc
* Key feature: tickets
* Waterfall(linear and sequential practice)

CI/CD

* Continuous integration, continuous delivery, continuous deployment
* CI: Build -> Test -> Merge
* C delivery: Automatically bug tested -> uploaded to repository
* C deployment: Repository -> Production
* Tool:
  + Jenkins
    - Extensible plugin service
    - user -friendly UI
    - Easy installation and config
    - Free
  + Gitlab
    - Manage project data through branching tools
    - Manage project data from a single distributed version control system
  + Circleci
    - Integrate with github, bitbucket
    - Runs on a virtual machine or container

HW: Integrate Jenkins with github



1. What is your learning plan tomorrow?

* Focus on Spring concepts
* Build a simple Spring project
* Two coding questions on binary search