FERRAMENTAS DE DESENVOLVEMENTO

Assignment

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Assignment

○ The final objective of this course's assignment is to build a web app.

○ For doing so, you will need to use the following widely utilised technologies:
  ○ Java EE
  ○ Spring framework
  ○ Spring Boot + React
  ○ JPA and a Relational Database
  ○ JUnit, Jest, MockMVC
  ○ etc.

○ You should be familiar with most of them, in order to start with the development you can use a suitable Maven archetype.

Objective

○ The assignment's objective is to **evolve the archetype** by incrementally adding new functionalities, solving problems, and improving software quality by **correctly** using the **tools** that are discussed in the lessons.

○ We try to simulate **real life** scenarios where the projects have errors and your work relies on the work of someone else.

○ Real-life means that you have to explore new technologies, new frameworks, new domains, to take decisions, be responsible, work in teams, reschedule, etc.

○ You must **exploit** the power of the **tools** in order to minimise the faults in the project and to improve overall development quality.

○ **Sport Fantasy League:** Your work will consist on implementing a web app that allows users to play a fantasy league of a specific team sport chosen by the developer team.

○ Sports examples: volleyball, basketball, football, water polo, base-ball, e-sports, rugby, etc.

○ Sports must not be repeated among groups.

○ (27/09/2024) You can create your profile with your unique login, password, name and avatar on the platform. Admin users will be able to add new players from the chosen sport. These players will have some statistics associated to them. When accessing to the platform users should be able to see the list of all the added players.

- ○ If you do not know about your task: talk to your client (MeD), see the landscape, explore the domain, that's one of the most key tasks for a software engineer.

- ○ Play with the archetype we will provide to you explore the frameworks and technologies, follow tutorials, this is real-life, **we do not answer programming questions**.

Rules

○ As you may notice, the tasks are **not defined in detail**, this can potentially lead to different interpretations of the objective. Most of them will be accepted though, the **knowledge** you have acquired in courses such "Requirements Engineering" or "Development Methodologies" should be **put in place** in order to assess the *actual* **requirements** of the tasks.

○ You should expect that the new iterations can motivate changes (again, real-life™) in the decisions taken in previous completed iterations, in this way we try to simulate real life situations where unexpected requests can lead to huge changes in the application logic. In these situations, the correct use of the tools to deal with the change correctly is crucial.

Rules

○ You are expected to work in **teams of 5** persons.

○ At the end of the course, every student should **master every tool** and concept mentioned in this course so do not over-specialise yourself in a particular tool or task within the team because you will not pass this course.

○ The evaluation will be based on both the **correct use** of the tools, the accomplishment of the requirements, and how that influenced the overall quality of the project and team productivity, so keep in mind to actually take advantage of the tools for **improving your project**, not only using them as a mandatory overload.

Please, remember **this IS NOT a programming course**.

References

○ Bruce Johnson. Visual Studio Code. 2019. 171 pages. ISBN-13: 978-1119588184

○ Jon Loeliger & Matthew McCullough - Version Control with Git: Powerful tools and techniques for collaborative software development, O'Reilly ISBN-13: 978-1449316389

○ Andriy Lesyuk - Mastering Redmine, Packt Publishing ISBN-13: 978-1849519144

○ Sonatype Company - Maven: The Definitive Guide, O'Reilly ISBN-13: 978-0596517335

○ John Ferguson Smart - Jenkins: The Definitive Guide, O'Reilly ISBN-13: 978-1449305352

References

- Alan Berg - Jenkins Continuous Integration Cookbook, Packt Publishing ISBN-13: 978-1849517409
- G. Ann Campbell, Patroklos P. Papapetrou - SonarQube in Action, Manning Publications ISBN-13: 978-1617290954
- Sai Matam, Jagdeep Jain - Pro Apache JMeter: Web Application Performance Testing ISBN-13: 978-1484229606
- Scott Oaks - Java Performance: The Definitive Guide. ISBN-13: 978-1449358457
- Robert C Martin - Clean Code: A Handbook of Agile Software Craftsmanship ISBN-13: 978-0132350884
- Robert C Martin -The Clean Coder: A Code of Conduct for Professional Programmers ISBN-13: 978-0137081073

Initial setup

Initial setup

- ```
  mvn archetype:generate -DarchetypeGroupId=org.irlab.fd.maven.archetypes
  -DarchetypeArtifactId=spring-boot-react-archetype -DarchetypeVersion=4.0
  -DgroupId=es.udc.fi.dc.fd -DartifactId=imagination -Dversion=0.1-SNAPSHOT
  -DcurrentYear=2024 -DregCredName=fd-reg-cred -DdeveloperId=irlab
  -DdeveloperMail=irlab@udc.es -DdeveloperName='Information Retrieval Lab'
  -DgitBaseUrl=gitlab.fic.udc.es -DgitGroup=ferramentas.2024
  -DdeveloperUrl=https://gitlab.fic.udc.es/ferramentas.2024/imagination
  -DurlSiteDevelop=https://deploy.fic.udc.es/imagination
  -DurlSiteRelease=https://imagination.irlab.org -DprojectDescription='Test
  project for FD 2024' -DprojectName='FD Spring MVC Imagination App'
  -DrepoUserId='ferramentas.2024'
  ```
- ```
  cd imagination
  ```
- ```
  mvn install
  ```
- ```
  mvn spring-boot:run
  ```
- Check `http://localhost:8080/imagination`

Initial setup

- ```
  ssh-keygen -t rsa -C
  "javier.parapar@udc.es"
  ```
- Upload the public key to https://gitlab.fic.udc.es
- ```
  git config --global user.name "Javier
  Parapar López"
  ```
- ```
  git config --global user.email
  "javier.parapar@udc.es"
  ```
- ```
  git init
  ```
- ```
  git remote add origin
  git@gitlab.fic.udc.es:ferramentas.2023/seton.git
  ```
- ```
  git add .
  ```
- ```
  git status
  ```
- ```
  git commit -m 'Initial commit'
  ```
- ```
  git push origin main
  ```

@jparapar

`http://www.dc.fi.udc.es/~parapar`