

Recruiting - Back-end - Homework (new)

WORK IN PROGRESS

Goal

The goal of this homework is to assess the candidate's capability, to provide a well architected microservices based solution, given a monolith webapp.

Problem

Replace existing **Loan Request flow/User Registration** of a monolith webapp with a fleet of microservices.

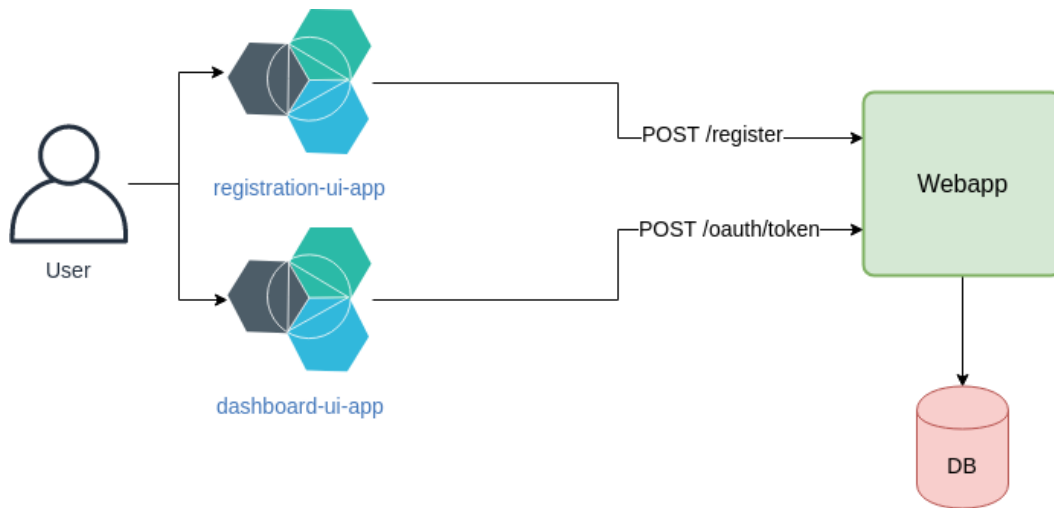
The webapp given in this problem consists of one feature for sample named Loan request flow. In this we will also register our new users if email id is not found in our database.

During this flow we capture the below domain objects (request fields are given inside {})

1. LoanApplication {amount, duration}
2. User {email, password}
3. Person {firstName, lastName, phone, address, city, postalCode}

Assume an existing UI application named registration-ui-app is calling **/register** endpoint without any security with the entire registration payload containing above three Domain objects.

After registration the user can login to see all the loans he/she has applied by Signing in through dashboard-ui-app. This app uses oauth2 hence we expect your solution to be oauth2 compliant.



Expectations

1. A fleet of microservices should be created adhering to the best practices and Microservice design patterns
2. Existing oauth2 mechanism should work for login flow (password grant or authorization_code)
3. Should use database and a data access layer in the program to exhibit experience in them
4. As our microservices architecture is based out of spring boot and spring cloud we expect something similar
5. Microservices should be production ready in terms of logging and monitoring
6. Write atleast one Unit and one Integration Test
7. Feel free to reuse any ready made containers for mundane cloud setup or messaging system