CQRS AND EVENT SOURCING WITH SPRING BOOT

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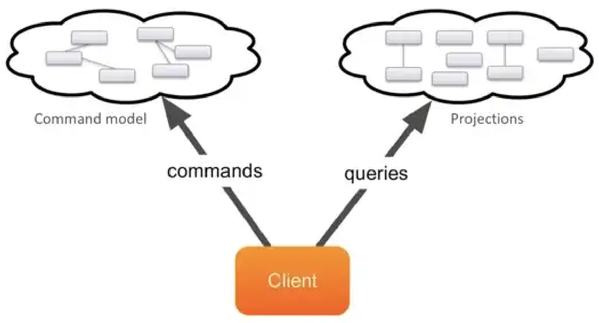
INTRODUCTION

This project explores the concept of CQRS and Event Sourcing with Java Spring boot. Event Sourcing gives us a new way of persisting application state as an ordered sequence of events. Moreover, CQRS is about segregating the command and query side of the application architecture.



OBJECTIVE

The main motive of the project is to implement CQRS and Event Sourcing with Spring boot and Axon Framework. We have implemented this pattern on the banking structure to make the transactions and workflow efficient.

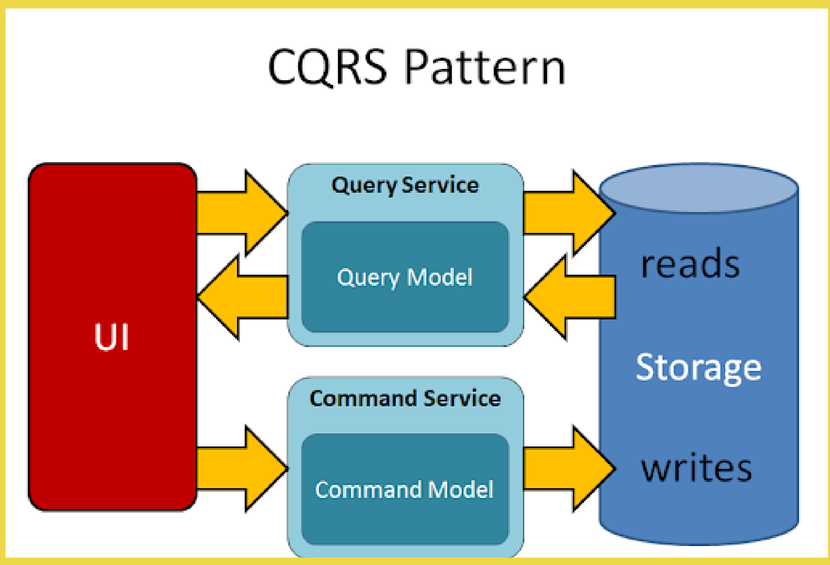
METHODOLOGY

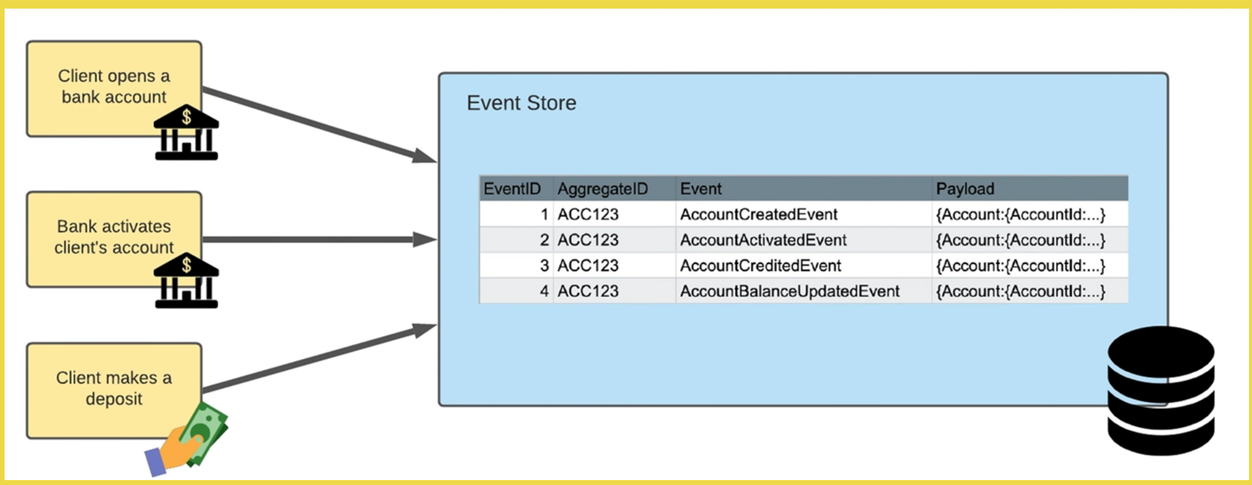
The methodology implemented is that we are focusing on bank accounts where it will be able to create accounts, credit/debit money, and all these wil be under the command side. The query side will deal with the account details. So, we have built a spring boot app which have two major packages, one for command side and other for query side. Command side package will open up a restful endpoint, submit requests to create an account, credit/debit, these requests will produce the respective events and allow them to persist in in-memory storage and further dispatch to the query side. Query package will handle the events dispatched by the event store. Moreover, the framework we have used is Axon which is an open-soruce Java-based CQRS and Event sourcing framework.

RESULTS

The result we achived is that we have built an spring boot app which is handling the requests of the Bank accounts. We have demonstrated how Event sourcing and CQRS can be implemented with a spring boot application with Axon framework. Axon framework provides us as all the backbone components to implement Event Sourcing/CQRS. This application might not be covering all aspects of a complete banking application but it is a sample application that helps in understanding the overall implementation of CQRS/Event sourcing.

ARCHITECTURE





TOOLS AND TECHNOLOGIES

GitHub
IntelliJ IDEA
MySQL

LANGUAGES

Java

REFERENCE

N/A