Java Full Stack Backend Development

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Github Doc Link

MURASLABS

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About Myself

Software Developer
About You GmbH - Ecommerce
Germany

- B.S. and MSc. in Computer Engineering
- 9 Years in Computer Science
- 6 Years in Professional Software Development
- Experience and Expertise
  - Web Application Development
  - Android Application Development
  - Frontend Development
  - Machine Learning

Curriculum

14th September - 30th November

Curriculum

1. **14 September - 20 September**

   i. Day One [14 September] `Introduction, Fullstack Development, Tools and Prototype Presentation`
      a. Tools
         a. IntelliJ IDEA
         b. DBngin - All-in-One Database Version Management Tool
         c. Tableplus
         d. Postman
         e. Balsamiq Mockup
         f. Visual Studio Code
         g. Oh My Zsh - Terminal
   ii. Day Tow [16 September] - `Git, GitHub, Git Flow`
      a. Resources
         a. Git Flow
         b. Git School
         c. Try Git
         d. Atlassian Git
         e. Git SCM
   iii. Day Three [17 September] - `Git For Team and Pull Requests`

Curriculum

2. **21 September - 27 September** `Introduction To Databases`

    i. Day Four [21 September] - General Introduction - Relational, Document, In-Memory, Graph, Ranking
        a. Resources
           a. Introduction to Databases
           b. Mysql Tutorial
           c. DB Ranking
           d. MongoDB NoSQL
           e. Redis In-Memory DB
           f. Graph QL
    ii. Day Five [23 September] - `MySQL DDL, DML`
    iii. Day Six [24 September] - `Querying`

3. **28 September - 4 October** - `Introduction To Databases 2`

    i. Day Seven [28 September] `Normalization`
    ii. Day Eight [30 September] `Indexing`
    iii. Day Nine [1 October] `Optimization & Backup`

Curriculum

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4. **5th October - 11th October -** `Spring Boot & Frameworks`

    i. Day Ten [5th October] `Spring Boot & Build Tools`

        a. Spring Boot

        b. Gradle Build Tool

        c. Maven - Software Project Management Tool

    ii. Day Eleven [7th October] `Routing and Filtering`

    iii. Day Twelve [8th October] `Building RESTful Service`

        a. JSON API - A SPECIFICATION FOR BUILDING APIS IN JSON

        b. Restful API

        c. Rest Service

5. **12th October - 18th October -** `Spring Boot & Databases`

    i. Day Thirteen [12th October] `Spring JPA & Hibernate ORM`

        a. Hibernate ORM

        b. Hibernate vs JPA

        c. Spring JPA

    ii. Day Fourteen [14th October] `Hibernate ORM Deep Dive`

    iii. Day Fifteen [15th October] `` ``

Curriculum

6. **19th October - 25th October** `Full Stack Development and Testing`

    i. Day Sixteen [19th October] `Wiring Frontend and Backend`

    ii. Day Seventeen [21st October] `Writing API and Unit Tests`

    iii. Day Eighteen [22nd October]

7. **26th October - 1st November** `Working With External APIs`

    i. Day Nineteen [26th October] `Facebook, Google, Stripe, DingConnect`

    ii. Day Twenty [28th October]

    iii. Day Twenty One [29th October]

8. **2nd November - 8th November** `Spring Sequrity`

    i. Day Twenty Two [2nd November] `Basic Authentication, Token Authentication, JWT, OA`

        a. Spring Boot Security

    ii. Day Twenty Three [4th November]

    iii. Day Twenty Four [5th November]

Curriculum

9. **9th November - 15th November**

    i. Day Twenty Five [9th November] - `API Documentation`
        a. Rest Docs
        b. Swagger: API Development for Everyone
        c. Postman: Documentation
    ii. Day Twenty Six [11th November]
    iii. Day Twenty Seven [12th November] `Creating API Documentation`

10. **16th November - 22nd November -** `Servers — Nginx, Tomcat, Docker`

    i. Day Twenty Eight [16th November]
        a. Nginx - High-performance HTTP server
        b. Apache Tomcat
    ii. Day Twenty Nine [18th November] `Docker`
        a. Spring Boot Docker
        b. Docker Hub
        c. Docker
    iii. Day Thirty [19th November]

Curriculum

11. **23rd November - 29th November** – `Deployment To Production`

     i. Day Thirty One [23rd November] `AWS Deployment`

        a. AWS

    ii. Day Thirty Two [25th November]

        a. Google Domains

   iii. Day Thirty Three [26th November]
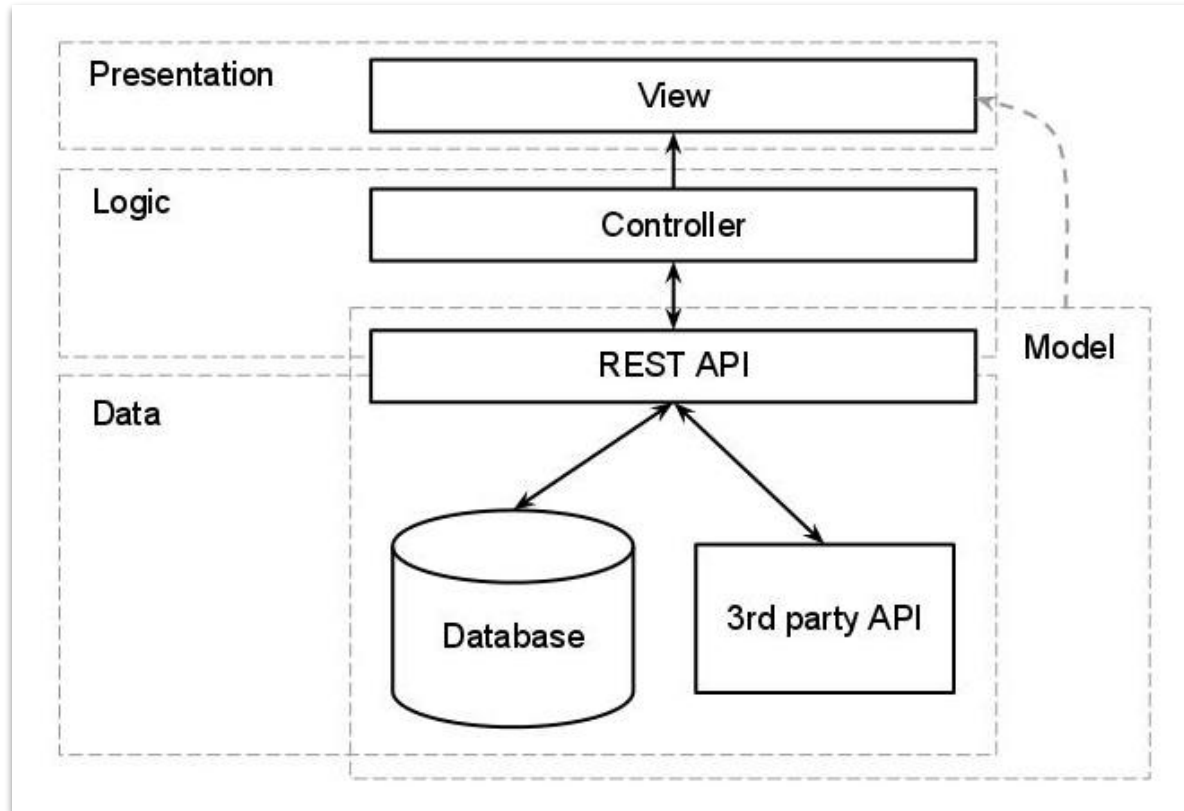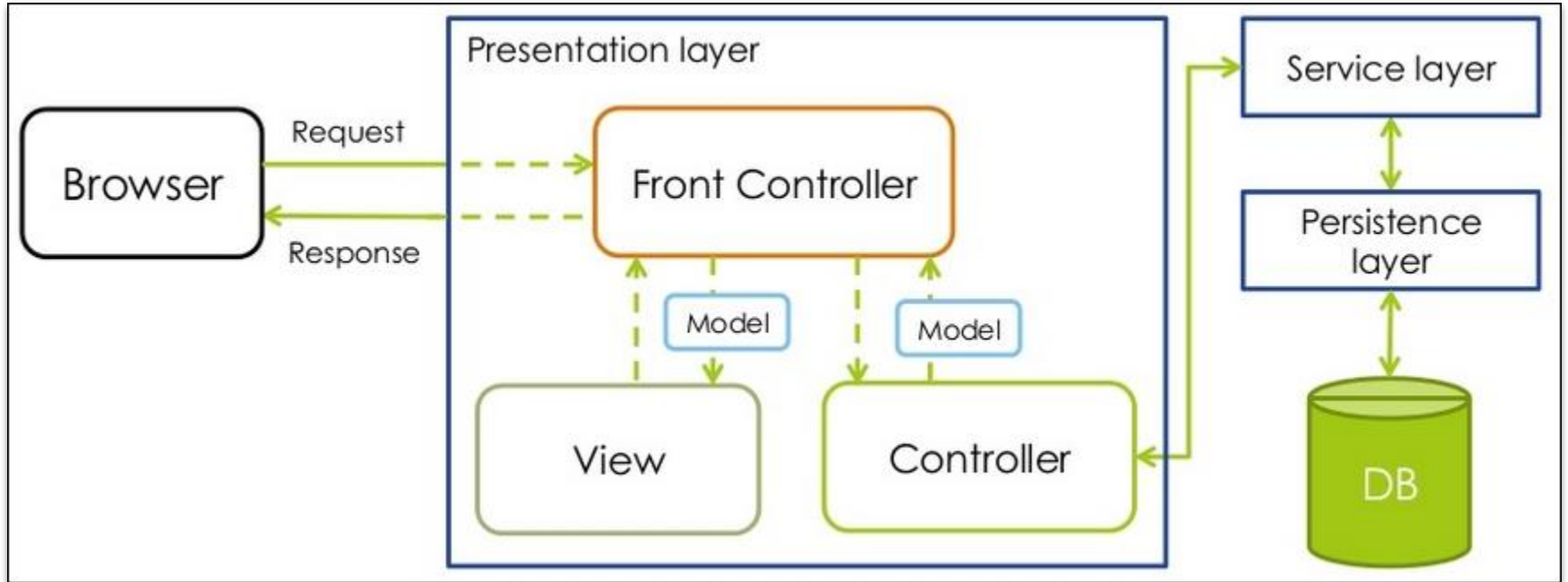
Extra Resources

1. Developer Roadmap
2. VPN
3. Markdown

Full Stack
Backend Development

Web Application Architecture

Spring MVC Architecture

Complete Backend Roadmap

https://github.com/muraslabs/docs#complete-backend-roadmap

Project Proposal

Kapusta
Money Transfer

Tasks

- Build Money Transfer and Top Up application from scratch.

Requirements

- Kyrgyz People from abroad should be able to send top ups to Kyrgyzstan
- Users should be able to see list of transactions
- Super admin should be able to manage transactions, users, money transfers

Balsamiq Prototype

Home Page

The Cheapest Way To Transfer Money To Kyrgyzstan!

Send money directly to your friends' or relatives' mobile number and let them cash out at any time.

Sign Up and Transfer

Login and Transfer

Top Up Page

Money Transfer

Mobile

+996 772 00 01 12

Select Operator

OXKGKG90931   M6KGKG56824   BEKGKG62489

Amount

100

Name on Card

Nursultan Turdaliev

Card details

💳 Card number   MM / YY CVC

Transfer

Project Demo

Money Transfer

Third Party Dependencies

- Stripe
  - Stripe is the best software platform for running an internet business. We handle billions of dollars every year for forward-thinking businesses around the world.
- Facebook, Google
  - Registrations, Logins
- DingConnect
  - Top Up API

IDE and Tools

a. IntelliJ IDEA
b. DBngin - All-in-One Database Version Management Tool
c. Tableplus
d. Postman
e. Balsamiq Mockup
f. Visual Studio Code
g. Oh My Zsh - Terminal

End Result

Feature Complete Product
Deployed To Production