

Exploring The Finance World

SECTOR-BASED TRADE RECOMMENDATION SYSTEM

By - Group 9

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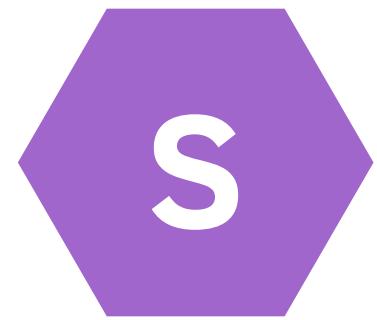


Agenda

Key topics discussed in this presentation

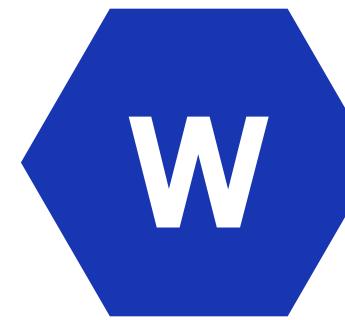
- Problem Statement along with Introduction
- Setting up a Project overview
- Technologies and Databases implemented
- Business Logic used.
- Experience
- Project Demonstration





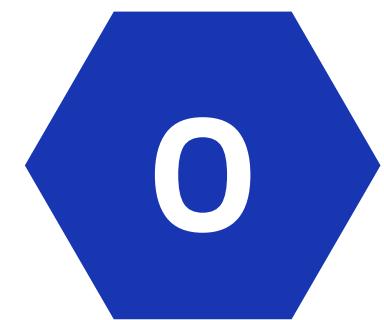
Stocks

When you invest in a company's stock, it means you own a share in the company that issued the stock.



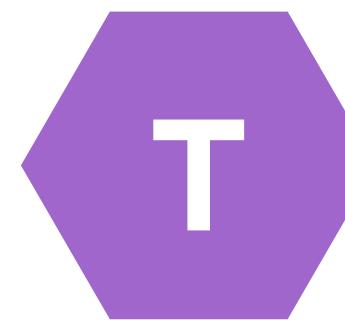
Trade

Stock trading involves buying and selling shares in companies to make money on daily price changes.



Nifty 50

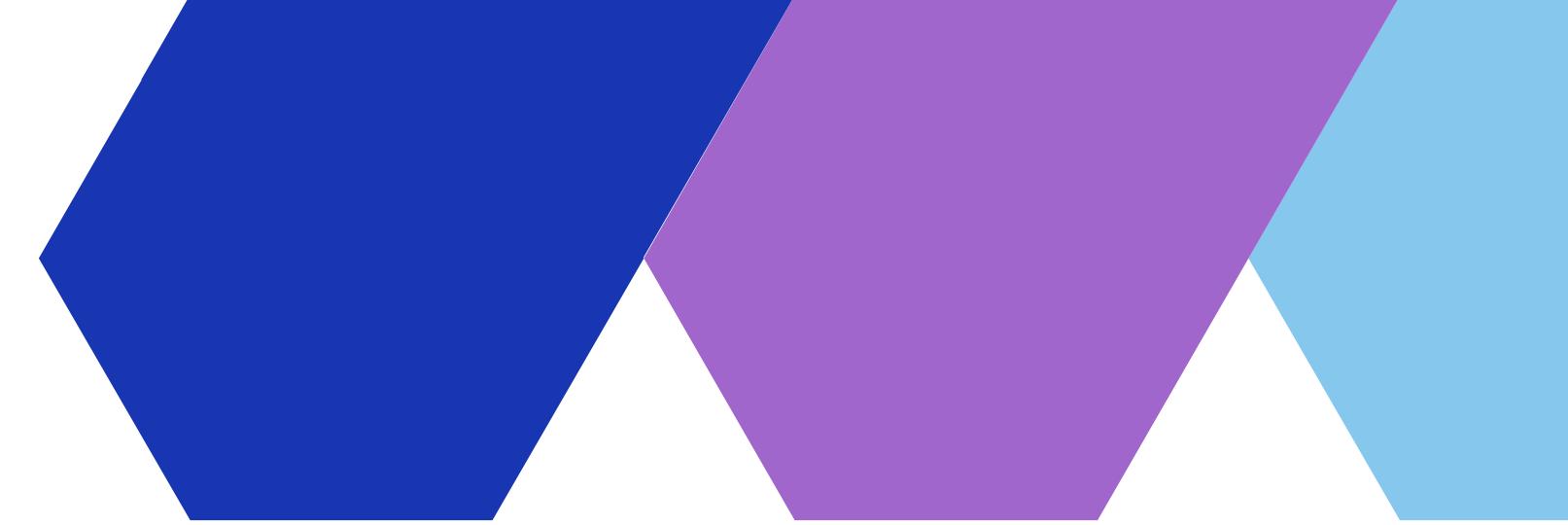
Nifty collects the sample of 50 performing and luring stocks on the NSE (national stock) to determine market trends.



Recommendation System

Trade recommendation system based on user-selected sectors (from Nifty stocks). From the filtered securities - market data takes the top 5 performing stocks based on their growth over the last two weeks.

Problem Statement



Constructing a trade recommendation system based on User-selected sectors (from Nifty stocks)

- Users can select to save any of the recommended stocks with quantity and current market price.
- When the user logs in again the user should be able to see the saved stocks and stats.

Technologies Used

Frameworks:

- Angular
- Springboot

Database:

- MySQL

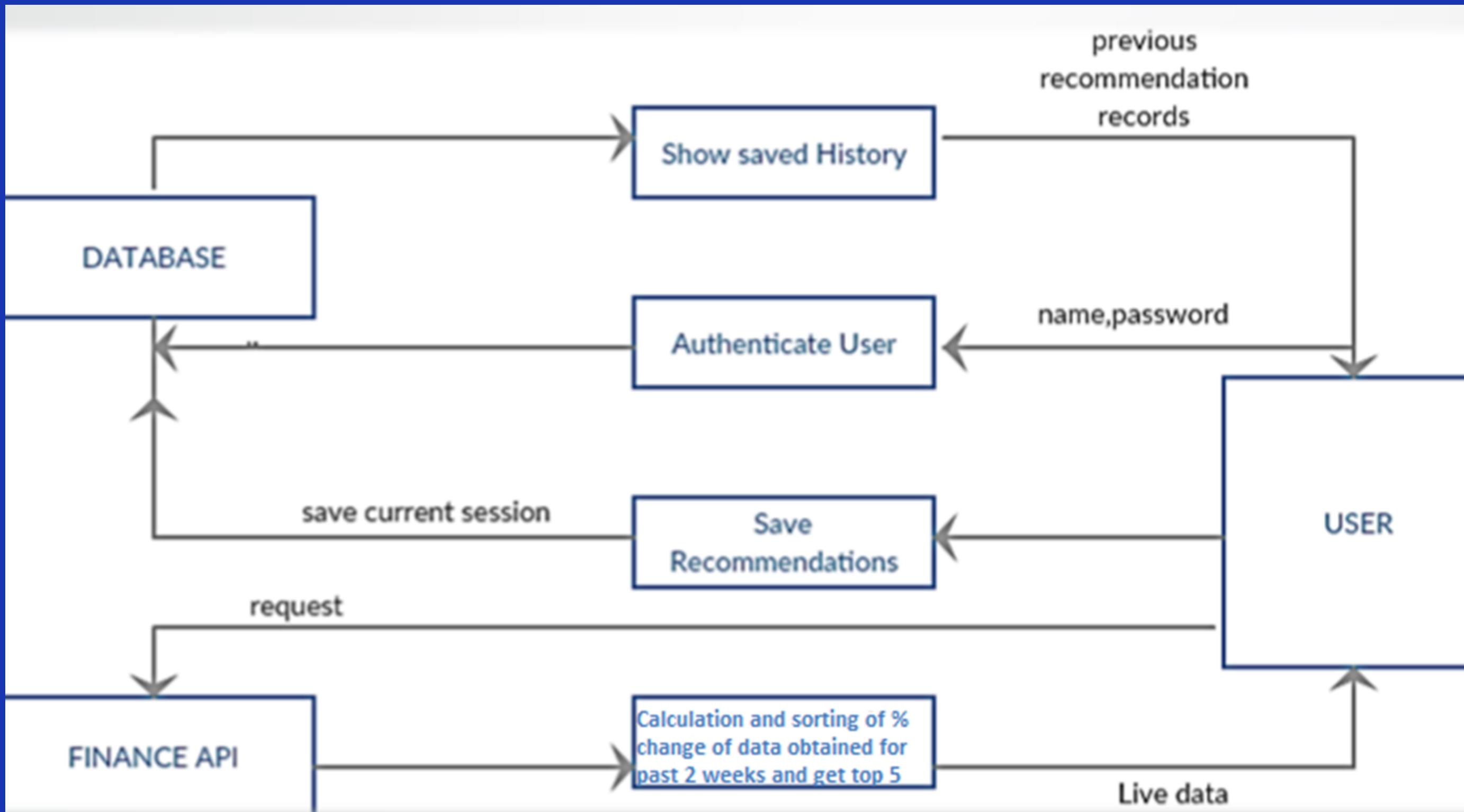
Web-Service:

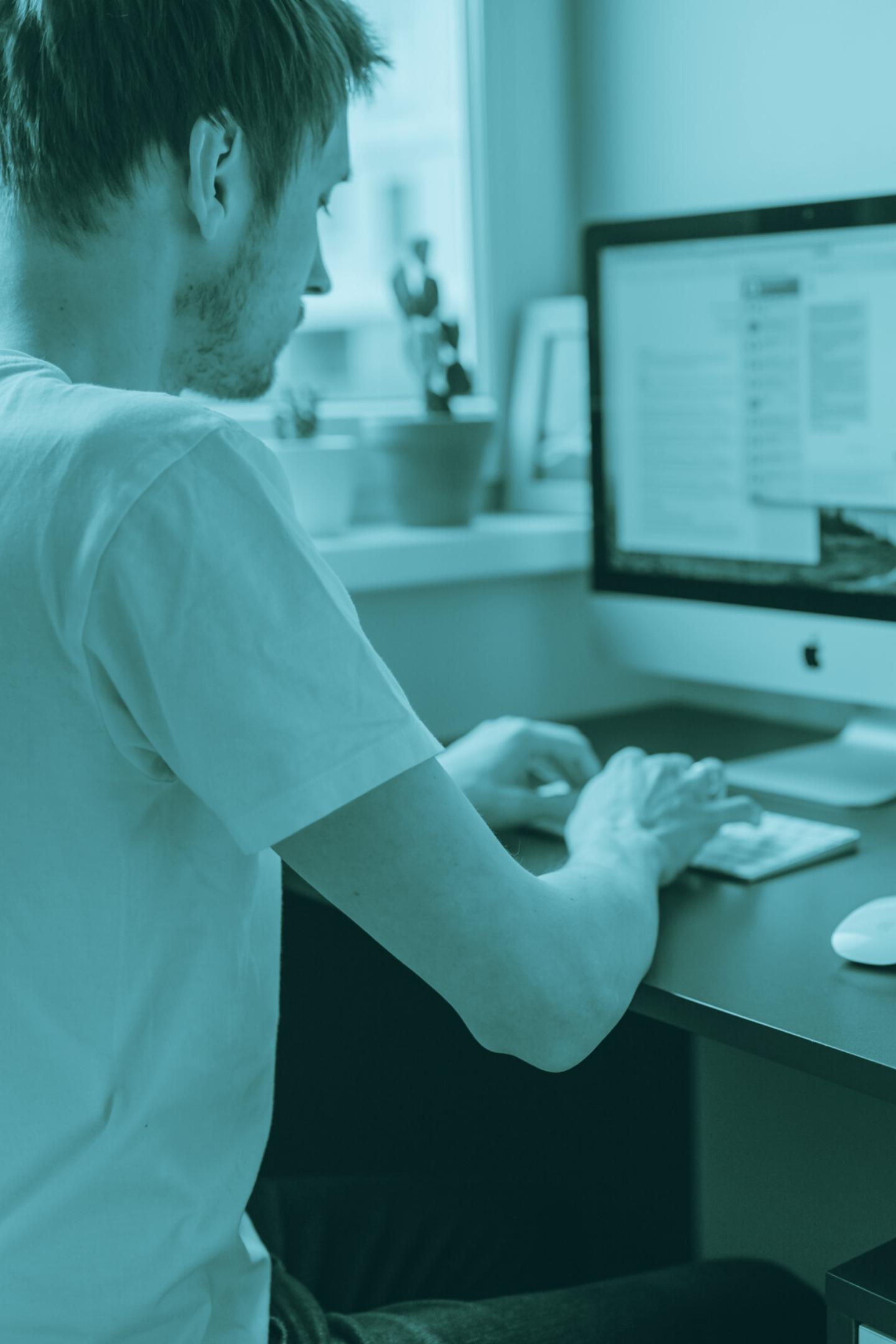
- Yahoo Finance API

IDE:

- Spring Tool Suite
- Visual Studio Code

System Architecture



A photograph of a man with short brown hair and a beard, wearing a light-colored t-shirt. He is sitting at a desk, facing a computer monitor. His hands are on a keyboard, and he is looking down at it. The monitor displays a grid of small images or icons. The background is slightly blurred, showing an office environment with other desks and equipment.

PROJECT DEMONSTRATION



Scope of The Project

- **SECTOR-WISE recommendation of top stocks from NIFTY fetched from the Yahoo Finance API**
- **Saving them as per their current market prices and quantity for the future reference**
- **Users can easily see previously saved stocks saved by them.**

Business Logic

Trade recommendation system takes live market data for specific sector from the Yahoo finance API.

Data for each company is taken over a period of 2 weeks.

To recommend the top performing stocks on the basis of their growth over the last 2 weeks
Percentage gain is calculated

$$\frac{\text{Last(today)} - \text{Open(2 weeks ago)}}{\text{Open(2 weeks ago)}} * 100$$

Then companies present in the selected sector are sorted based on this percentage gain.
Then the user is allowed to save these recommended stocks along with their details.

RESTful Web Service

- Goal : to make web services more effective and try to define services using the different concepts that are already present in HTTP
- Message exchange format used : JSON
- HTTP methods used :
 - 1) GET/userID : It retrieves the stock details saved by the user from the database
 - 2) POST/stockdetails: It saves the stock details in the database

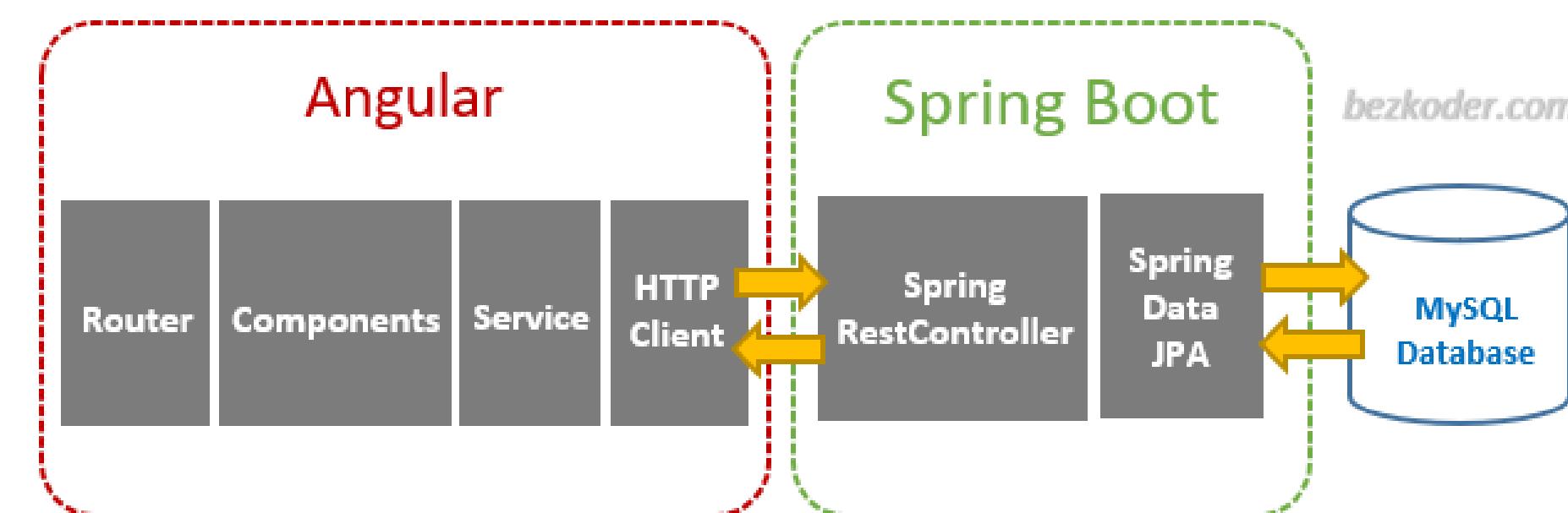


Spring Data JPA

An interface between systems using HTTP to obtain data and generate operations on those data in all possible formats.

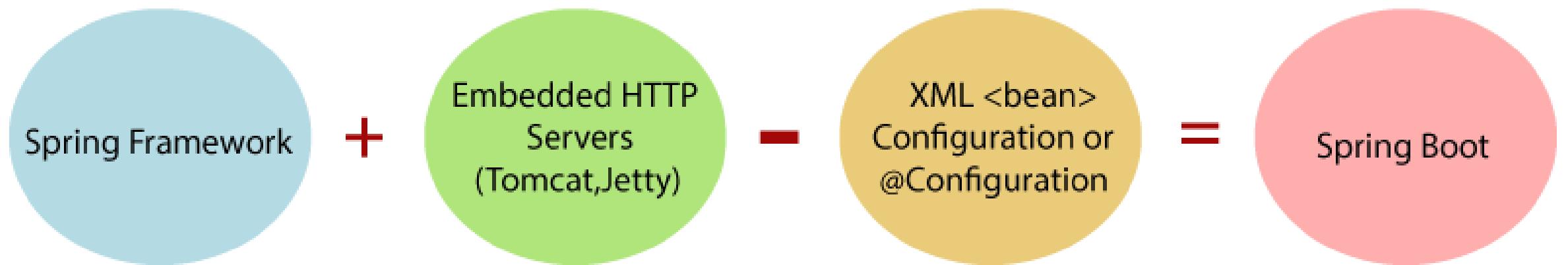
The most logical, efficient and widespread standard in the creation of APIs for internet services.

The four very important transactions in any REST service and HTT{ specification are-POST(create), GET(read and consult), PUT(edit) and delete.



SpringBoot

- Spring Boot version used : 2.7.3
- Microservice based framework for making a production ready application in very less time
- very useful if we want to develop REST API
- No need to build the configuration of project manually



Angular

- Use of HTML + CSS + AngularJS Features of AngularJS:
- AngularJS is a structural framework for dynamic web apps.
- It lets you use HTML as your template language and lets you extend HTML syntax to express your application's components clearly .
- Angular's data binding and dependency injection eliminate much of the code you currently have to write.
- And it all happens within the browser, making it an ideal partner with any server technology.



“OUR EXPERIENCE”





Any questions
and
suggestions!?



Thank you

