EXPLORING THE FINANCE WORLD

Sector-Based Trade Recommendation System

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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.
- Project Demonstration

INTRODUCTION

STOCKS

When you invest in the stock of a company it means you own a share in the company that issued the stock.

TRADE

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

NIFTY 50

Nifty collects the sample of 50 performing and luring stocks on the NSE (national stock) to determine the 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 on the basis of their growth over the last two weeks.

Problem Statement

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

- User 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-

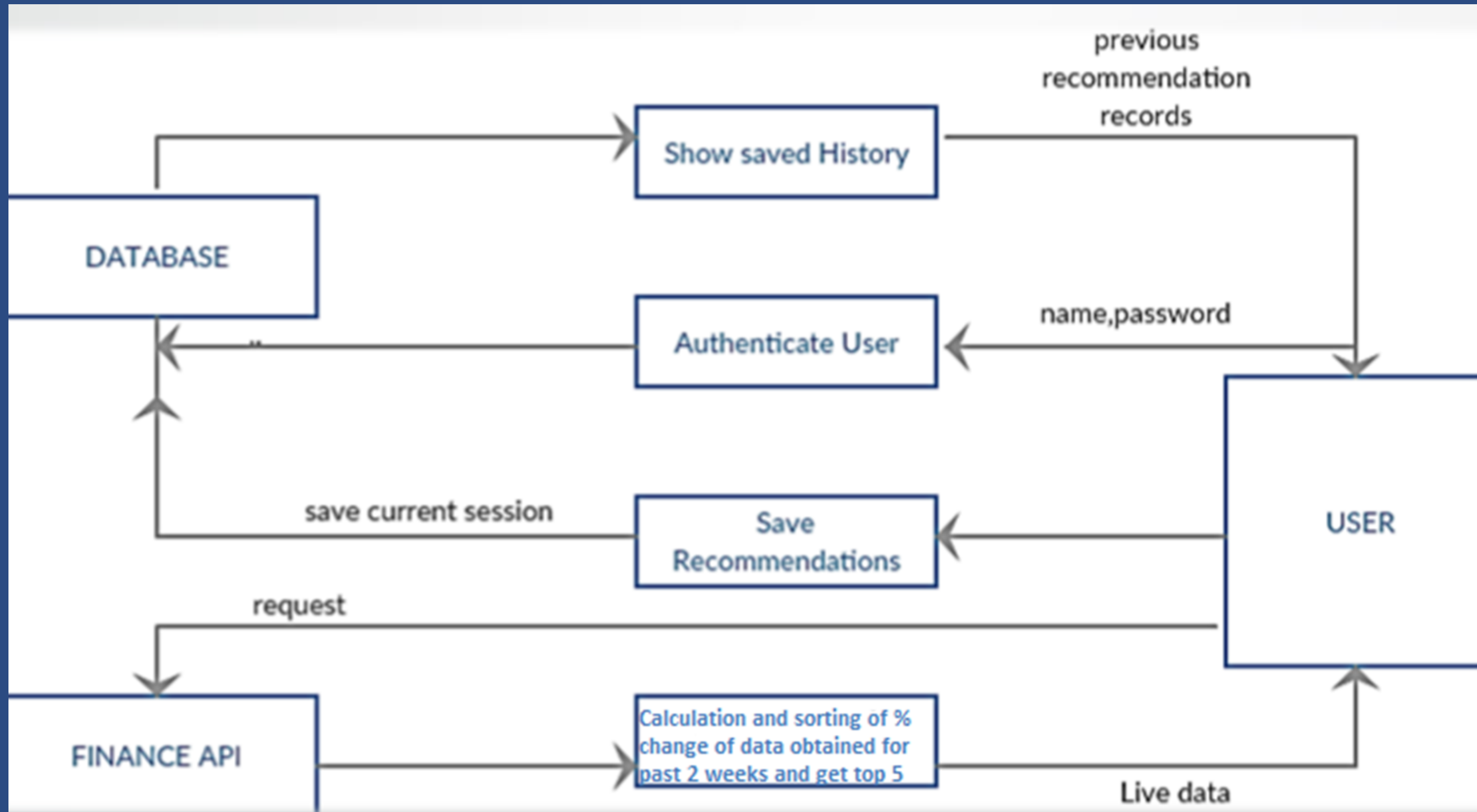Frameworks : Angular , Springboot

Database : MySQL

Web-Service : Yahoo Finance API
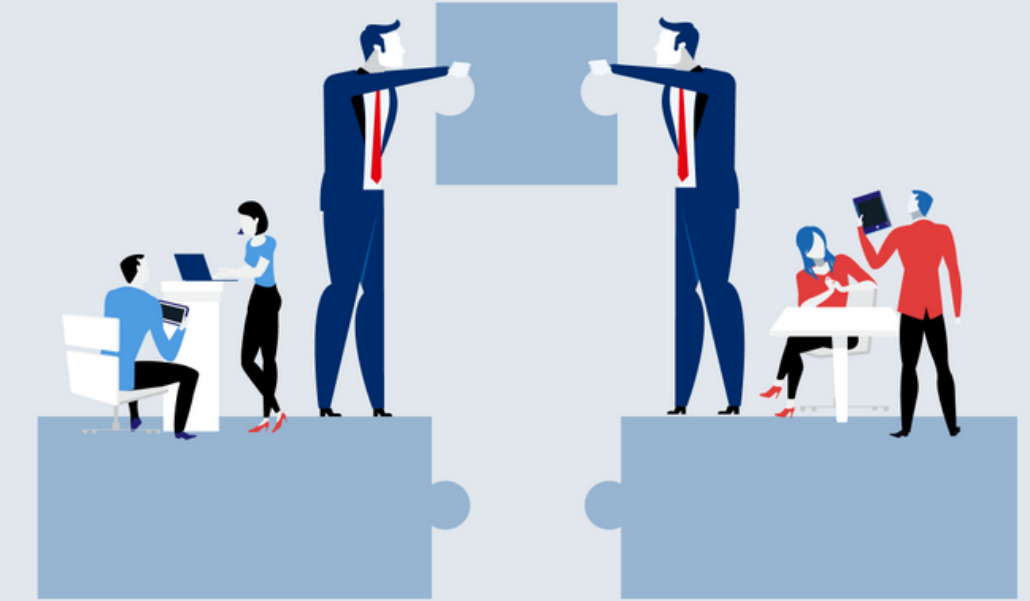
IDE : Spring Tool Suite, Visual Studio Code

PROJECT DEMONSTRATION

System-

Scope of the project

IN SECTOR BASED RECOMMENDATION SYSTEM THE REGISTERED USER CAN VIEW THE STOCK PRICES OF NIFTY OF THE SELECTED SECTOR AT A GIVEN INSTANCE OF TIME
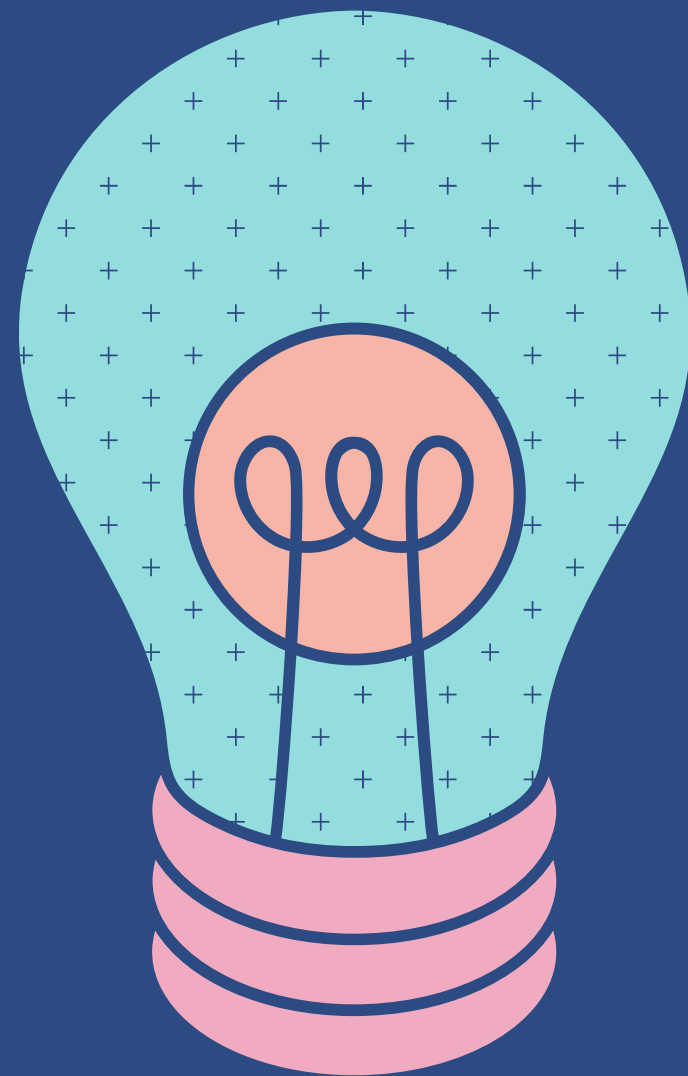
- Once logged in, the user selects a market sector, that gets filtered with the Nifty constituents that match it

- The user is allowed to view the top recommendations filtered over 2 weeks data that provides the best trading opportunities

- The user can save the current stock recommendations

Business Logic

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

Data is taken for a period of 2 weeks.

The data fetched is run under the expression

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

to get the percentage of gain over the time duration.

The data is sorted in decreasing order to get the top 5 performing stocks.

The processed data is displayed in user interface where the user can wish to store the data for the day.

Middleware

- Created on Spring Tool suite using Spring Boot (framework of Java) using java programming language and DAO and annotations
- Spring data JPA has been used for saving the stock details

- Design Patterns used-
1. Model View Controller Design Pattern
2. RESTful Web Services

Restful Web services

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.
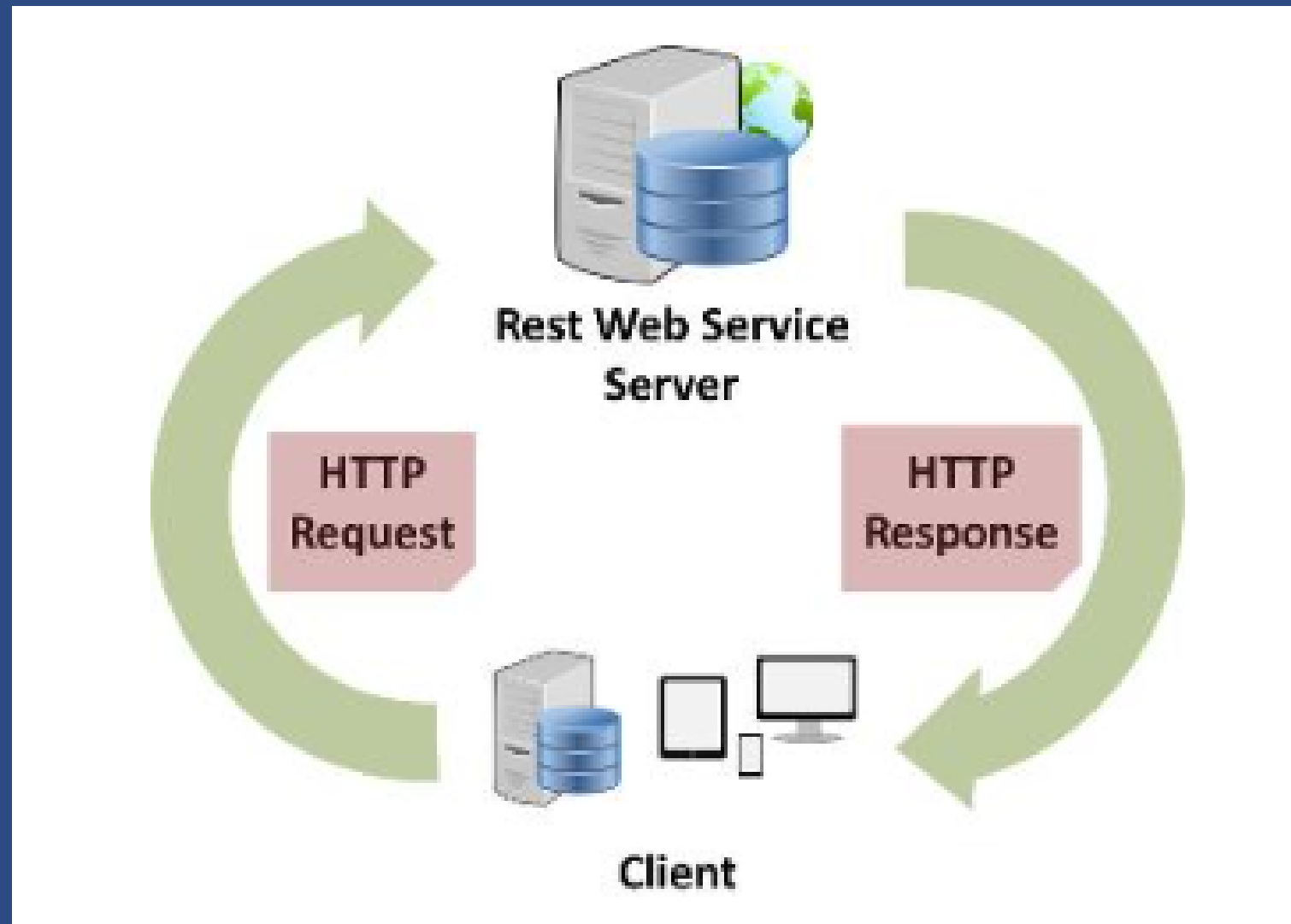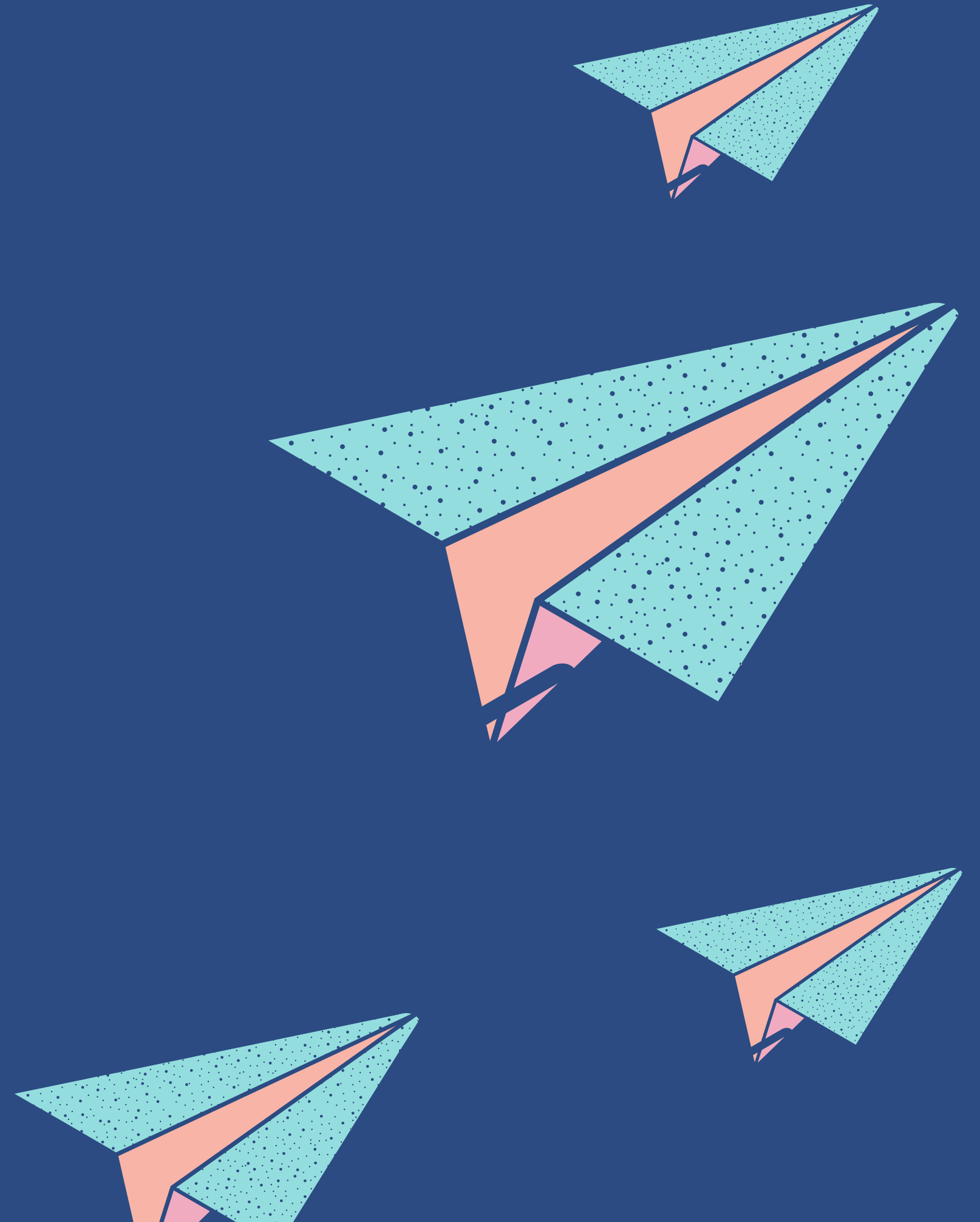
USER_INTERFACE

- 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's 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"

Do you have any questions?

Thank You