Creating REST Services of Ecommerce website with Spring Boot using Microservises Architecture and Spring Cloud

A Report for the Review1 of Capstone Design -I

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**Fall 2020 - 2021**

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**Abstract**

Building a Rest API’s for a website using Java, The intention is to reproduce the backend model of a website that is already used by our generation frequently. Example of one such website is Amazon and IRCTC website, with complete frontend we will make a Web Application and the Rest API’s. As a developer, we are required to think out of the box, plan your development strategy and try developing API’s in a way that they support maximum number of features being used in the website and maximizing results from each API, reduce any redundancy, We will also use Microservises Architecture and the Spring Cloud’s for building the API and the API’s can be tested through Swagger.

RESTful APIuse**s** existing HTTP methodologies defined by the RFC 2616 protocol. They use GET to retrieve a resource; PUT to change the state of or update a resource, which can be an object, file or block; POST to create that resource; and DELETE to remove it.

In this we will use SPRING CLOUD(NETFLIX EUREKA) which is a client retrieves a list of all connected peers of a service registry and makes all further requests to any other services through a load-balancing algorithm. Spring Cloud provides tools for developers to quickly build some of the common patterns in distributed systems (e.g. configuration management, service discovery, circuit breakers, intelligent routing, micro-proxy, control bus, one-time tokens, global locks, leadership election, distributed sessions, cluster state). These patterns work well in any distributed environment, including the bear metal data centers, developer's laptop, and managed platform such as Cloud Foundry.

In this we will use a tools such as: Java, Maven projects, Spring Boot, Spring WebMVC, Spring Cloud’s, JavaScript, Angular, STS(spring tool suits) because Spring framework targets to make J2EE development easier to use and promotes good programming practices by enabling a POJO(Plain old Java object)-based programming models.

**Comparative Study**

REST APIs is that they provide a great deal of flexibility. Data is not tied to resources or methods, so REST can handle multiple types of calls, return different data formats and even change structurally with the correct implementation of hypermedia.

We will be creating services for an e-commerce website, Those services will be embedded in Rest API. Services like payment, cart, login, registration, data rating will be created, so as to make work easier.

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**Required tools**

* Spring Boot
* Spring WebMVC
* Spring Cloud(Netflix Eureka)
* JAVA
* MySQL Database, Apache Derby, H2 Database.
* Html, JavaScript, CSS

**Feasibility Study**

Much needed tool for the time being to save time and utilize resources efficiently.

* Easy data updation
* Smartphone platform
* Ease of access
* No Competition

Income by selling API which will be containing services.

**How we will reach people?**

1. Start with small (family, friends, college).
2. Awareness campaigns at places such as near the Markets(where many peoples are found in high quantity.)
3. Advertisement across all platforms specially social media.
4. Mouth of word

**References**

<https://www.irjet.net/archives/V6/i2/IRJET-V6I2335.pdf>

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