**Project Title:**

Nearby Bank Finder – Spring Boot Microservice Using Google Maps API

**Objective**

The purpose of this project is to build a Spring Boot microservice that allows users to find nearby banks by entering a ZIP code. The system returns a list of banks within a 10-mile radius using real-time data from Google Maps APIs. This helps improve the user experience by providing accurate and location-based results.

**Use Case**

A user enters a ZIP code (for example, 71270 for Ruston, LA).

The system performs the following steps:

* Uses the Google Geocoding API to get latitude and longitude of the ZIP code.
* Uses the Google Places API to find banks within a 10-mile radius.
* Returns a list of nearby banks with their name, address, and distance in miles.

**Why This is Useful**

* Users can quickly find banks near them
* It saves time compared to searching manually
* Results are accurate and updated in real-time using Google Maps
* It can be easily integrated into web or mobile applications

**Technology Used**

Spring Boot ->To build the RESTful microservice

Google Geocoding API ->To convert ZIP code into coordinates

Google Places API ->To find nearby banks

REST API ->For communication with the client

Swagger UI ->For testing the API

Postman ->For manual API testing

GitHub ->For version control

**API Overview**

GET /banks/nearby?zip=71270 Returns banks near the given ZIP

**Output Example**

json

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{

"name": "Chase Bank",

"address": "297 North Service Road East, Ruston",

"distanceInMiles": 5.5

},

{

"name": "Origin Bank",

"address": "1511 North Trenton Street, Ruston",

"distanceInMiles": 5.7

}

]

**Final Note**

This application was developed with a focus on simplicity, accuracy, and reusability. It works for any valid U.S. ZIP code and can be extended in the future to include additional features such as filtering by bank type or operating hours.

Thank you for the opportunity to work on this assignment.