**Payment System Documentation**

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**Introduction**

This document provides step-by-step instructions for setting up and understanding the Payment System, which consists of three main components:

Payment Gateway Server,

Merchant Application Server,

and Payment UI Web.

**System Overview**

The Payment System is designed to facilitate payment processing between merchants and users. The system comprises the following components:

**Payment Gateway Server:** Manages payment processing logic and communication between the Merchant Application and Payment UI.

**Merchant Application Server:** Handles merchant-specific logic and interactions.

**Payment UI Web:** A React-based web application for users to make payments and check payment status.

**Prerequisites**

Before you begin, make sure you have the following tools and software installed:

1. Node.js
2. npm
3. MySQL
4. Maven
5. Java

Also, Add the path to the 'mvn' and 'java' executable to your system's PATH environment variable

**Database**

**MySQL Setup**

1. Ensure you have MySQL installed.
2. Create a new database for the payment system:

CREATE DATABASE payment\_gateway\_db;

1. Update the database configuration settings in the application.properties files of Payment\_Gateway\_SpringBoot.

**Database Schema**

The Payment Gateway uses a MySQL database. The schema tables are defined in the SpringBoot Application will be generated automatically.

**Payment Gateway Server**

**Installation and Setup**

1. Clone the repository.

git clone <https://github.com/deepak-lamba/Payment_Project.git>

1. Navigate to the Payment Gateway Server directory:

cd Payment\_Project\Payment\_Gateway\_SpringBoot

1. Install dependencies:

npm install

1. Start the Payment Gateway Server:

cd Payment\_Project\Payment\_Gateway\_SpringBoot\target

run mvn spring-boot:run

The server will be running on http://localhost:8080 by default.

**Merchant Application Server**

**Installation and Setup**

1. Navigate to the Merchant Application Server directory:

cd Payment\_Project\Merchant\_Application

1. Install dependencies:

npm install

1. Start the Merchant Application Server:

cd Payment\_Project\Merchant\_Application\

run mvn spring-boot:run

The server will be running on http://localhost:8081 by default.

**Merchant Server Registration**

To integrate your Merchant Application Server with the Payment Gateway:

1. Use the following endpoint to register your server:

GET <http://localhost:8080/api/registration/register-server>

1. Include the following Authorization header:

Authorization: hash@access@register

1. Upon successful registration, the Payment Gateway Server will respond with:

{

"merchantId": "your-merchant-id",

"serverKey": "your-server-key"

}

Store these values in your application.properties file.

**Payment UI Web**

**Installation and Setup**

1. Navigate to the Merchant Application Server directory:

cd Payment\_Project\web\_payment\_ui

1. Install dependencies:

npm install

1. Start the Payment UI Web

npm start

The web application will be accessible at http://localhost:3000 by default.

**Conclusion**

Follow these instructions to set up and run the Payment System successfully. If you encounter any issues, you can reach out to me.