Assumptions :

1. Payment Service shall be handled via third party API
2. Professionals or service providers are assigned to particular order or booking placed on the basis of their work and area/place they live in.

Microservices & Explanations:

1. Api-gateway : Netflix zuul is used for api-gateway, host: localhost port : 9999. All services can be handled via this gateway.
2. Discovery-Server : Netflix Eureka is used for service discovery, all instances are registered to it. Host : localhost port : 5672
3. product-service : It will be the homepage, a user visits as he open apps. It mainly contains all the products or services offered by the company.

Host : localhost port : 8085

1. bookings-service : As soon as the order or service is booked by the customer, a new booking is added in the customers list of bookings as scheduled, which is later confirmed or rejected via service provider or professional. Host : localhost port : 8081
2. Customer-service : It handles all data related to customer, and provides details like name, address of customer to other services. Host : localhost port : 8069
3. Professional-service : It stores details related to service providers, and their domains like age, work and address or area which are used by admin service to map them with customer bookings. Host : localhost port :8082
4. workOrder-service : As bookings is to customers, similarly work-orders are to professionals.

When a booking is assigned by admin to a professional, then a workorder for that professional is created. Host : localhost port : 8090

1. Admin-Service : Only service, not exposed to any port. It is triggered via message broker as soon as new booking comes in it gets the customer details via id and with access to work and address or area, it fetches professionals from professional services and creates new work order, whose status is further changed by professionals as accepted or rejected.

Spring cloud stream rabbit is used as message broker, and jaegar is used for monitoring purposes.

For HLD numbers are shown to trace the order in which execution will take place.

Diagram

Description automatically generated

INTER SERVICE COMMUNICATION APPROACH

Rest Template is used majorly for calling APIs between services. Spring Cloud stream Rabbit MQ is used for triggering events between microservices.

