**Assignment 1**

There are total of 7 microservices in which two of them are discovery-server and api-gateway.

Other 5 are –

* Service-receiver – All the user related tasks are done here like requesting for a service, fetching the orders.
* Admin-team – All the admin related tasks are done in this service like checking service-availability, etc.
* Service-Provider – Service provider related tasks are done here like taking confirmation about any service-request.
* Order Service – Orders are maintained in this service.
* Notification service – All the notifications are send by this service only.

All the services register themselves with discovery-server and the interservice communication is done only through api-gateway service.

Diagram

Description automatically generated

I have taken an assumption that is the service re quest send by the user will be first checked for availability by the admin-team microservice and it will then automatically assign the request to the available provider, rather then doing it manually.

Also used the dummy data for users and service providers. The dummy data is present in admin-team microservice.

Inter service communication is done in two different ways –

* Messaging is through active mq
* Rest call through api-gateway

**Requests -:**

1. When user request for a service -

* First a service receiver will request for a service that will be through service-receiver
* Then that request will be forwarded to admin-team service to check whether service is available or not in his/her area.
* If available then a request will be sent to order service to create a new order with status PROCESSING in the name of the user and a message is published to the queue to notify the respective service provider through service-provider service.
* And if not available then user will be shown a message “No service available in your area”.

Diagram

Description automatically generated

Graphical user interface, website

Description automatically generated

1. Also after this user can fetch the status of his orders through this request –

* First the request will go to the service-receiver.
* Then it will go to order-service to fetch the orders of a particular user.

Diagram

Description automatically generated

Graphical user interface, application

Description automatically generated

1. When any provider gives confirmation for the service –

* First the provider will hit the service-provider service with his confirmation and other details.
* Order status will be updated through order-service with status
* And user will be sent notification using the message queue.

Diagram

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Graphical user interface, application

Description automatically generated**Message Queue –**

Graphical user interface, application

Description automatically generated