Microservices Assignment

# Business Use Case

Design & Develop a Backend System for Application similar to Urban Clap, The business idea is to bridge the gap between service providers and service receivers.

Service Receivers (Consumers) can hire electricians, yoga trainers, interior designers, etc. They can avail all these services via placing an order through the Mobile App.

When a service is requested, Admin team will assign the request to the Service Providers according to the Area or Availability, the professionals in that area get a notification. They can either accept or deny.

If the request is accepted, the user will get notifications with respect to the booking confirmation and service provider details & Provider will also get the Job Description.

# Tools/Technologies

1. Any language of choice for writing microservices
2. Service Discovery (Eureka for Java/DotNet, other languages can choose any)
3. API Gateway for implementing routing (Zuul for Java, Ocelot for DotNet, other languages can choose any)
4. Docker as deployment tool

# Deliverables

1. A writeup of identified microservices for above use case along with reasonable explanation (with High Level Diagram).
2. URL definitions of the scenarios (Sample POSTMAN collection, or request/response JSONs)
3. API Gateway, Service Discovery Integration
4. Interservice Communication Approach Write up & Implementation
5. Distributed Tracing Screenshots.
6. Source code of all microservices.
7. Docker images to be built using Dockerfile and pushed to dockerhub (links to be submitted in document)
8. Docker Compose YAML File, Intention is that your application should be able to get up and running on any other system properly just through Docker Compose.

Guidelines:

1. This assignment only requires to identify all the microservices for above mentioned use case and expose the API endpoints.
2. No User interface is required.
3. Mention relevant assumptions taken while implementing application.
4. Your solution should be able to build/compile and run.
5. Standard coding guideline should be strictly followed.
6. Integration with database is not mandatory, in memory data structures (lists,maps) can be used to store data temporarily for the assignment.
7. Choose the proper communication and microservices design patterns as per the scenario and design.

Priority wise parameters on which we will be evaluating the assignment:

PART-1

* Write-up for Microservices Identification with HLD
* Docker File, Docker hub link & Docker Compose File
* Expose API Endpoints (Postman Collection request/response)

PART-2

* Implementation of API Gateway & Service Discovery & Distributed Tracing
* Implementation for all microservices with respect to Use cases & Interservice Communication Approach

Assignment Submission: 2 weeks from the Start Date.