Project Specification – Version 1.0

Release Date: Sep 22, 2022
Project Lead: Bharat Shankaranarayanan
Client: Dr. Saurabh Dey

Title:

HalifaxFoodie *- A Multi-Cloud based Serverless Food Delivery System*

Objective:

The primary objective of this project is to build **cloud plumbing system**, where an application will be designed using serverless technologies to process data (more specifically large-scale data). This is like building a water plumbing system, which is built once with plenty of interconnected pieces, and used many times. It does not require any specialist for the operation. In this project, you will be building a "cloud data plumbing system", which could be used by many clients to process their data. You will use different backend services, and simple front-end application to build the system.

Explanation:

This project is introduced in the Serverless Data Processing Course (CSCI 5410) to fulfill the course requirement. This is a group project (weightage 40%), and each group is required to perform specific tasks within a given time frame. There are project constraints, and scope, which must be followed by each team. The project will follow an agile model, where each team should welcome changes in the requirements. However, considering the time and resource restriction, requirement changes will be limited.

Hypothetical Scenario:

DALSoft5410 is building a serverless Food Delivery system using multi-cloud deployment model, and backend-as-a-service (BaaS). The Food Delivery System - "*HalifaxFoodie*", should provide customization feature, and additional services for restaurant owners, and limited services to customers. The application should provide an online virtual assistance, which can quickly answer the queries of registered restaurant owners, and customers or guests.

The virtual assistant functionality can be extended to support customer escalation. The application should initiate a chat functionality between a registered customer, and customer service representative if there are any delivery or service quality issues.

The application will provide data security, user {restaurant, and customers} management, customer feedback polarity analysis, food item delivery tracker, restaurant ratings, customer recommendation, and discount coupon etc. As an additional feature, each restaurant can upload their top recipe on the system for checking similarity score.

DALSoft5410 has selected serverless application to minimize the development and project running cost. The company has identified two cloud platforms - AWS, and GCP to build, test, and deploy their application. They have decided to follow the official documentations of AWS and GCP to build the different pieces.

If they select server-oriented architecture, then they need to manage and configure the backend service, which they cannot do due to their resource limitations. Therefore, serverless is the only solution they found at this point. They have obtained two types of accounts from AWS, and one account from GCP, which they can use for building, testing, and deploying their application.

Since they are going to follow agile method, they can build, test, and change each components of the project whenever there is a change in the requirements.