Cloud Food - Food Ordering Application

Team Members:

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Main Goal:
This project aims to build an online food ordering platform to bring the best restaurants and customers closer and make ordering hassle free. This aims to satisfy the demands of restaurants and customers by using Amazon Web Services (AWS) as the cloud platform. This project will rely on Amazon Web Services for all the core business concepts from hosting to registering restaurants to storage of restaurant information, menus, customer information, orders to load balancing the order requests.

Motivation:
The motivation behind this project was to choose a real time application that we can connect with easily while building. This field of ordering is of high interest because it requires the service to be up at all times (no downtime accepted), ability to seamlessly scale with increase in the number of customers and orders and the flexibility to expand on compute and storage with respect to surges. This topic seemed to us to be the best use of cloud computing resources where once setup, there would be no need to worry about maintenance of servers and developers would simply have to improve the business model with analytics and new features.

Stretch Goals:
If time permits, we plan to extend this application to include

1. Features for delivery riders (we plan to call them clouders)
2. Personalization and Recommendation using Amazon SageMaker

Cloud Technologies to be used:
For this project we plan to use Amazon Web Services as our IaaS. Under this we plan to use

1. Compute:
    a. Amazon EC2 - Virtual servers
    b. AWS Lambda - Event driven computing service
    c. Amazon Elastic Load Balancing
2. Database:
    a. Amazon DynamoDB - NoSQL Database

3. Front End Web:
    a. Amazon API Gateway - To build,deploy and manage APIs
    b. Amazon Amplify - To build and deploy web applications ??
4. Containers??
5. Management - Iac:
    a.

Architecture:

Division of Responsibility:

1. Proposal, Design and Architecture - All
2. EC2 setup and Load Balancing
3. Dynamodb setup
4. Customer FastAPIs and Integration to AWS Lambda and API gateway
5. Customer Front End and Hosting
6. Restaurant FastAPIs and Integration to AWS Lambda and API gateway
7. Restaurant Front End and Hosting