### *HLD*

Functional Requirements

* User can search different restaurant based on his/her location.
* User can select any restaurant.
* User can see the menu of selected restaurant.
* Restaurants can change the menu any time.
* User selects restaurant and add different food items from the menu.
* User orders the food by selecting different online payment modes.
* Cash on delivery can be also option .
* User can track the order in real time.
* User can cancel the order.
* The restaurants process the orders by preparing the meal and packaging the orders.
* The restaurant contacts the delivery service or their personnel delivery staff to deliver.
* Customers will have different offers in the form of coupon, discounts, etc.

# Non-functional Requirements

* FOR EXAMPLE:
* No. of orders = 10,000 orders per minute
* No. of cities and towns operational = 556
* Total number of restraunts listed on the application = 160,000
* Total active delivery partners = 1,90,000
* Total number of order cancellations = 1,800 daily
* System should be highly scalable and available.
* User should be able to get all features with minimal latency.

**Bandwidth Estimates**  
For order, since we are expecting 167 Orders /Second so, the total incoming data for the service will be:

* 167 Orders/Second \* 500 bytes = ~ 1 MB/Second

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Description automatically generated

* *User Authentication and Registration*
* **Feature Description**: This feature allows users to create new accounts or log in with existing ones.
* **High-Level Design**:
  + User Interface: Provides forms for registration and login.
  + Authentication Service: Verifies user credentials and generates authentication tokens.
  + User Database: Stores user information securely.
* *Product Search*
* **Feature Description**: Enables users to search for food items, restaurants and browse through categories.
* **High-Level Design:**
  + Search Engine: Processes user queries and retrieves relevant items.
  + Category Navigation: Provides hierarchical browsing options.
  + Product Catalog: Stores detailed information about available items.
* *Product Details and Reviews*
* **Feature Description**: Displays detailed product information and user reviews.
* **High-Level Design**:
  + Product Information Service: Retrieves and serves product details.
  + Review System: Manages user reviews and ratings.
* *Shopping Cart and Checkout*
* **Feature Description**: Allows users to add items to their cart and complete purchases.
* **High-Level Design**:
  + Shopping Cart Service: Manages user carts and item quantities.
  + Payment Gateway Integration: Facilitates secure payment processing.
* *Order Management*
* **Feature Description**: Allows users to view and manage their orders.
* **High-Level Design**:
  + Order Tracking System: Provides real-time updates on order status.
  + User Order History: Stores past orders for reference.

Three major components:

* Customer's Application
* Driver's Application or Delivery guy's application
* Admin Panel

**Customer's Application**

* Selection of city and listing of restraunts
* **Searching menu**: Allow users to search for different restaurants, cafes, pubs, and bars by location and cuisines. Users can go through the menus and choose an item from using the search filter; users can easily find their favorite eating places.
* **Order placement/Cancellation**: The user can place an order of selected dishes and food with just a few simple taps on the screen. User can cancel order with a given allowed time.
* **Tracking Drivers**: Users can check how much time a driver will take to reach their food parcel.
* **Payment gateway integration**: It will be required for the payment by users. It will have multiple options of payment.

**Driver's Application or Delivery guy's application**

* **Driver's profile** - Driver can update his profile details like his name, email, address, phone number, photos, or any other details.
* **Notification for orders**: Through push notifications, drivers can get constant updates & alerts for new food orders online. It will help in the accurate delivery service of your restaurant.
* **Map for the delivery route**: Integrate Google Map or Waze and allow drivers to choose the shortest and fastest routes to reach the location.

**Admin Panel**

* **Restaurant management**: Being on the admin panel, one can directly manage all the restaurants by adding, updating, and removing any eating joint from the list. He can also check active restaurant status and also menu pricing.
* **Analytics & report generation**: Using the analysis and report feature, you can get real-time insights of reports and other accounting information, which helps you to identify the growth and opportunities to expand reach.
* **Monitoring every action**: Monitor all the drivers, changes in the menu, deliveries, ratings & reviews of drivers, canceled orders, and other important data related to the driver’s performance.
* **Payment and commission management**: Allow owners to set payment and commission rates and manage it directly from the panel with every single partner and make payments.