**Software Requirements Specification (SRS)**

**FastBite – Online Food Ordering & Delivery App**

**1. Introduction**

**Purpose:**

The fundamental objective of this software system is to facilitate the user's capacity for the procurement of culinary provisions from a diverse array of gastronomic establishments, concurrently enabling the continuous monitoring of order progression through its complete logistical trajectory to final delivery.

**Scope**:

The delineated scope of this software system encompasses, but is not limited to, the comprehensive functionalities pertinent to user registration across distinct hierarchical roles (Customer, Restaurant Administrator, Delivery Operative), the systematic presentation and navigation of culinary offerings, the procedural initiation of purchase requisitions, the provision for various modalities of monetary remittance (electronic or pecuniary), and the intricate mechanisms for real-time order status ascertainment.

**Definitions**:

* **User**: A 'User' shall be formally defined as any individual or entity engaging with the application's interface, categorized herein into distinct archetypes: the Customer, the Restaurant Administrator, and the Delivery Operative.
* **Meal**: A 'Meal' denotes any culinary item or aggregate of items available for formal requisition through the application's ordering mechanism.
* **Order**: An 'Order' constitutes a formal requisition initiated by a Customer for specific culinary provisions, comprising a structured collection of designated Meals and associated logistical parameters.
* **Delivery**: 'Delivery' refers to the systematic process involving the transportation of a confirmed Order from its origin (the restaurant) to its designated destination (the Customer's specified location).

**2. Overall Description**

**Product Perspective**:

From a holistic product perspective, this application constitutes an autonomous software entity, engineered for seamless operationality across both Android and iOS mobile computing platforms. Its architectural foundation is predicated upon a centralized database infrastructure, the data of which is systematically managed and interfaced through a robust Application Programming Interface (API).

**User Classes**:

The discernible user classes are hereby formally categorized as follows:

* Customer: An entity whose primary function involves the initiation of culinary requisitions and the subsequent monitoring of their fulfillment.
* Restaurant Admin: An authoritative entity endowed with the prerogative to manage the inventory of culinary items and to oversee the disposition and status of incoming requisitions.
* Delivery Driver: A logistical operative assigned the responsibility of perceiving and subsequently executing the physical transference of assigned culinary requisitions to their designated recipients.

**Operating Environment**:

The designated operational milieu comprises mobile operating systems such as Android and iOS, relational database management systems including MySQL or PostgreSQL, a backend infrastructure to be developed utilizing either the Django or Node.js frameworks, and the integration of Firebase for push notification dissemination.

**3. Functional Requirements**

* **FR1**: The system shall necessitate the successful registration of a user account, which process shall be facilitated through the provision of either a valid electronic mail address or an authenticated telephonic number.
* **FR2**: Authentication of user access shall be achieved via a One-Time Password (OTP) mechanism, the secure generation and validation of which shall be incumbent upon the system.
* **FR3**: The system shall afford users the capability to systematically navigate and peruse the comprehensive catalogues of culinary offerings presented by various gastronomic establishments.
* **FR4**: A specialized search functionality shall be incorporated, enabling users to locate specific culinary items or gastronomic establishments based upon their designated nomenclature.
* **FR5**: The system shall enable the aggregation of selected culinary items into a provisional collection, hereafter referred to as the 'shopping cart,' prior to the formalization of an order.
* **FR6**: The formal confirmation of an order shall necessitate the explicit selection of a preferred method for monetary remittance, which may include electronic payment modalities or cash-on-delivery.
* **FR7**: The system shall provide mechanisms for the dynamic tracking and real-time updating of an order's status, encompassing stages such as 'Preparing,' 'With Driver,' and 'Delivered.'
* **FR8**: The Restaurant Administrator shall be endowed with the requisite privileges to perform comprehensive management operations upon culinary items, including their addition, modification, and deletion, in addition to the capacity for updating the status of incoming requisitions.
* **FR9**: The Delivery Driver shall possess the functionality to review requisitions specifically allocated for their logistical responsibility and to effectuate updates regarding the current status of said requisitions during transit.

**4. Non-Functional Requirements**

* **Performance**: The system is mandated to exhibit a response latency that does not exceed a duration of two (2) seconds.
* **Security**: Cryptographic hashing, specifically bcrypt, shall be employed for password encryption, and access control shall be strictly enforced based upon established role-based permissions.
* **Availability**: The system is engineered to maintain an operational uptime exceeding 99% of scheduled service periods.
* **Usability**: The user interface shall be designed with an emphasis on intuitive interaction, thereby ensuring facile navigation and operation for individuals possessing minimal technical acumen.

**5. Assumptions and Dependencies**

* It is axiomatically presumed that all designated users possess active and consistent access to the global telecommunications network.
* It is a prerequisite that gastronomic establishments consistently maintain and update their culinary offerings and order dispositions within the system.
* The system's location-based functionalities are contingent upon the successful integration and reliable operation of the Google Maps API.