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| **blinkit** |



**Product Dissection for Blinkit**

### **Company Overview:**

Blinkit was founded in Dec 2013, by Albinder Dhindsa and Saurabh Kumar as Grofers. This is the online grocery delivery service. Their goal is to offer a variety of products like household items. With its customer-centric approach , Their goal was to solve the problems (both on customer as well as merchant end) associated with the unorganized nature of the sector. The company’s 10-minute delivery service , it became the top leading online grocery platform and most of the people preferred it in Indian metro cities. Blinkit primarily delivers groceries, fresh fruits, vegetables, meat, stationary, bakery items, personal care, baby care and pet care products, snacks, flowers, Ambulance etc.

### **Product Dissection and Real-World Problems Solved by Blinkit:**

Grocery shopping can be time-consuming and inconvenient, especially for urban consumers in the fast pace life of today. When buying essential goods, consumers just struggle with long lines, heavy traffic, lost items in stock, late deliveries, among other things. Regular online grocery players deliver within 24-48 hours, which is not an option in case of an immediate requirement. Unpredictable weather and last-minute grocery shortages only compound the hassle. Also unpredictable weather and last minute grocery shortages adds to the hassle. Realizing this, Blinkit (previously Grofers) came up with a unique quick-commerce model which promises the delivery of groceries and essentials within 10-20 minutes.

To address this issue, Blinkit came up with dark stores — these are well-located micro-warehouses that ensure delivery personnel can reach the customers in no time. These dark stores are stocked with high-demand goods by optimal demand predictions, reducing stockout rate. It also uses real-time route optimization to enable delivery agents to navigate city traffic swiftly. In addition, Blinkit app offers a smooth shopping experience where users can order groceries, fresh produce, dairy, and household essentials instantly. Blinkit is not like a regular supermarket; it works 24/7, which is ideal for late-night or emergency purchases.

Blinkit’s model has had an outsized impact. By getting them their groceries in 10-15 minutes, it saves them the time of visiting a store. It has also created jobs for delivery executives and warehouse personnel, which it employed in their thousands. Moreover, through its AI-based inventory management, Blinkit has solved wastage as it stocks only the most frequented items. This led to high customer satisfaction with ultra-fast service, trustworthy product availability and the ease of refund with Blinkit.

However, even with its success, Blinkit experienced challenges like soaring operational costs, traffic delays, and complications in managing the inventory. In trying to resolve these problems, the company optimised locations for warehouses, used AI-power recommendations.

### **Case Study: Real-World Problems and Blinkit's Innovative Solutions:**

Blinkit, one of India’s leading quick-commerce platforms, revolutionizes the way Indians shop for groceries and everyday essentials. The fast-paced lifestyle of modern consumers has driven Blinkit to adopt smart technology that turns grocery shopping into a needless hassle. It has solved the day-to-day issue of long supermarket lines, things we wanted to buy that were out of stock, or deliveries that were too slow — bringing in ultra-quick delivery, in as little as 10 to 20 minutes. Through AI-powered demand shaping and intelligent inventory management.

#### **Problem 1: Time related users relationship**

**Real-World Challenge:** Most quick-commerce platforms, like Blinkit, charge an extra late-night delivery fee for orders placed during unusual hours (generally after 10 PM). Although, this enables us to recover some money to pay our operational costs (including the increased delivery executive incentives, fuel expenses, and limited availability of staff), it thickens the wall for people, who do need essentials at night be it medicines, baby food, or emergency groceries.

**Blinkit's Solution:**

Blinkit should not put extra delivery charges on essential goods especially goods related to health care such as sanitary pads, medicines, first-aid-kits.

By implementing subscription plans, AI-driven demand forecasting, and optimized delivery logistics, Blinkit can eliminate or significantly reduce late-night delivery fees while maintaining profitability. This will enhance customer experience, build trust, and drive long-term brand loyalty, making Blinkit the go-to platform for essential deliveries anytime, anywhere.

#### **Problem 2: Quality of goods related issues**

**Real-World Challenge:** Bad quality of organic goods such as vegetables or fruits, One of the biggest challenges consumers face while purchasing organic fruits and vegetables is inconsistent quality. Many times, organic produce is either not fresh, damaged, or lacks proper certification, leading to customer dissatisfaction. Additionally, traditional markets struggle with storage issues, supply chain inefficiencies, and fraudulent labeling of non-organic items as organic.

**Blinkit's Solution:**

Compensation should be provided for bad qualities of organic goods (such as vegetables or fruits) . Sometimes the fruits & vegetables which customers order; it received as rotten or are not fresh , blinkit should provide some compensation for that or can collaborate with trusted organic farms and suppliers, ensuring that all produce is fresh, pesticide-free, and meets organic certification standards. This eliminates the risk of low-quality or falsely labeled items. To build trust, Blinkit can offer a 100% freshness guarantee, allowing customers to request an immediate replacement or refund if they receive poor-quality organic goods.

#### **Problem 3: Variety or variability of goods related issues**

**Real-World Challenge:** for Limited Variety in Combos and Product Range on Blinkit

**Blinkit's Solution:**

Combos are a money savior for customers but there is very little variety present in combos; it should involve a different range of products so that it could be more beneficial. It should allow customers to create their own combos by selecting from a set of predefined categories (e.g., dairy, snacks, household essentials). To offer a discount on bulk purchases when the user selected multiple items It will be helpful for customer stability at this platform and build trust. Blinkit can enhance product variety, improve customer satisfaction, and increase sales through smarter, more diverse offerings.

### **Top Features of Blinkit:**

1. **10-20 minutes ultra fast delivery:** One of the best features of Blinkit is its 10-20 minute delivery that has fundamentally changed the shopping behaviors of people for groceries and daily essentials. We provide immediate” delivery in a domain where traditional e-commerce leads to a 24-48 hours delivery time period that no one prefers due to a long waiting time and their urgent grocery needs.
2. **Real Time Order Tracking:** Once an order is placed, users can track its progress in real-time, from the moment it leaves the warehouse to when it arrives at their doorstep.
3. **Deals and Discount**: Blinkit not only delivers groceries and essentials at lightning speed but also ensures that customers get the best value for their money through exciting deals, discounts, and promotions. The platform regularly offers exclusive discounts, limited-time offers, and bulk purchase deals, making everyday shopping more affordable.
4. **Review and Rating:** This platform provides review and rating for their users which help to
5. **Explore:** The "Explore" feature propels discovery by suggesting content based on user preferences and interactions. Users can explore posts, videos, and stories from accounts they don't follow, fostering a diverse online experience.
6. **Hashtags:** Instagram pioneered the use of hashtags, which categorise posts and enhance discoverability. Users can add relevant hashtags to their posts, making them accessible to a broader audience.

### **Schema Description:**

The schema for Blinkit involves multiple entities that represent different aspects of the platform. These entities include Users, Products, Categories, orders, order\_items, Vendors, Delivery\_agents, Payment, Review and Notifications. Each entity has specific attributes that describe its properties and relationships with other entities.

**User Entity:**

Users are at the core of the platform. The user entity contains information about each user:

* **UserID (Primary Key)**: A unique identifier for each user.
* **Username**: The chosen username for the user's account.
* **Email**: The user's email address for account-related communication.
* **Full\_Name**: The user's full name as displayed on their profile.
* **Phone Number**: Contact number of the user.
* **Created\_at**: The date when the user joins.
* **Address**: user’s address for delivery location.

**Product Entity:**

Stores information about grocery items available for purchase.

* **Product\_id:** A unique identifier for each product.
* **Name**: Product name.
* **Category\_id (Primary Key)**: A unique identifier for each category.
* **Price**: Price of product.
* **Stock**: Available Stock Quantity.
* **Vendor\_id**: Supplier/vendor providing the product.
* **Image\_url**: Link to product image.

**Category Entity:**

Stores categories for better product classification (e.g., Dairy, Vegetables, Beverages):

* **Category\_id (Foreign Key)**: A unique identifier for each category.
* **Name**: Category name.

**Orders Entity:**

Tracks customer orders placed on the platform:

* **Order\_ID (Primary Key)**: A unique identifier for each user.
* **User\_ID (Foreign Key)**: Reference to Users Table.
* **Order\_Status**: Order status (Placed, Packed, Out for Delivery, Delivered).
* **Total\_amount**: Total price of the order.
* **Payment\_id**: Reference to Payments Table.
* **Created\_at**: Order placement timestamp.

**Order\_items Entity:**

Stores details of products in each order:

* **Order\_item\_id**: A unique identifier for order item entity.
* **Order\_id (Foreign Key)**: Reference to Orders Table.
* **Product\_id (Foreign Key)**: Reference to Products Table.
* **Quantity**: Quantity of the product ordered.
* **Price**: Price per unit at the time of order.

**Vendors Entity:**

Stores details of vendors supplying products:

* **VendorID (Primary Key)**: A unique identifier for each vendors.
* **name**: Vendor's name.
* **Location**: Vendor’s address.

**Delivery agent Entity:**

Stores delivery personnel details:

* **Agent\_id**: A unique identifier for delivery agent id.
* **Name**: Agent’s name.
* **Phone number**: Agent’s contact number.
* **Vehicle type**: Agent’s vehicle type(bike or scooter).

**Payment Entity:**

Stores payment transactions related to orders:

* **Payment\_id**: A unique identifier for Payment id.
* **Order\_id**: Reference to Orders Table.
* **User\_id**: Reference to User Table.
* **Payment mode**: Payment mode using UPI, Card, COD.
* **Status**: Payment status (Success, Failed).
* **Transaction\_id**: Transaction reference ID.

**Review Entity:**

Stores user feedback on products:

* **Review\_id**: A unique identifier for Review id.
* **Product\_id**: Reference to Product Table.
* **User\_id**: Reference to User Table.
* **Rating**: Rating given by the user.
* **Comment**: User’s Review comment.

**Notification Entity:**

Stores notifications sent to users:

* **Notification\_id**: A unique identifier for Notification id.
* **User\_id**: Reference to User Table.
* **message**: Notification message.
* **status**: Read/Unread status.

**ER Diagram:**

Let's construct an ER diagram that vividly portrays the relationships and attributes of the entities within the Blinkit schema. This ER diagram will serve as a visual representation, shedding light on the pivotal components of Instagram's data model. By employing this diagram, you'll gain a clearer grasp of the intricate interactions and connections that define the platform's dynamics.

