**Capstone Project Name :Product Dissection for Flipkart**

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**Github Link :**

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**Project Overview:**

**Problem Statement:**

Welcome to this case study on dissecting and designing products for top leading platforms. In this case study, you will delve into the intriguing world of schema design for a prominent platform of your choice. Your task is to choose a top leading platform, research its features, and meticulously craft a schema design that encapsulates the essence of its functionality. By focusing on key entities, attributes, and relationships, you will gain invaluable insights into how data architecture drives the platform's effectiveness.

### **Company Overview:**

**Company Name:** Flipkart  
**Founders:** Sachin Bansal and Binny Bansal  
**Launch Date:** October, 2007

**Company Headquarters:** Bangalore, India

**Flipkart Private Limited** is an Indian e-commerce company, headquartered in Bangalore,India and incorporated in Singapore as a private limited company.. The company initially focused on online book sales before expanding into other product categories such as consumer electronics, fashion, home essentials, groceries, and lifestyle products.

The service competes primarily with Amazon India and domestic rival Snapdeal As of March 2017, Flipkart held a 39.5% market share in the Indian e-commerce industry. Flipkart has a dominant position in the apparel segment, bolstered by its acquisition of Myntra,, and was described as being "neck and neck" with Amazon in the sale of electronics and mobile phones.

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

Flipkart, one of India's largest e-commerce companies, has addressed and solved several real-world problems by providing innovative solutions. Here are some of the notable real-world problems that Flipkart has helped solve:

1. **Access to a Wide Range of Products:** Many people, especially in remote or underserved areas, have limited access to a diverse range of products. Flipkart's online marketplace has brought a vast catalogue of products, from electronics and fashion to household goods and groceries, to consumers across India.
2. **Convenience and Time-Saving:** Traditional shopping often involves time-consuming trips to physical stores. Flipkart's platform allows customers to shop from the comfort of their homes, saving time and reducing the hassle of commuting.
3. **Price Transparency and Savings:** Flipkart offers discounts, deals, and competitive pricing, allowing consumers to find products at more affordable prices compared to traditional retail. The platform also provides price comparisons and product reviews for informed purchasing decisions.
4. **Economic Empowerment:** Flipkart has empowered numerous small and local businesses by providing a platform for them to sell their products to a broader customer base. This has promoted entrepreneurship and economic growth in India.
5. **Job Creation:** The company's operations have generated employment opportunities for delivery personnel, sellers, customer service representatives, and others. This has contributed to job creation and economic development.
6. **Access to Rural Markets:** Flipkart's logistics and delivery network has extended to remote and rural areas, making it possible for people in underserved regions to access a wide range of products.
7. **Reducing Counterfeit Products:** By implementing strict quality control and verification measures, Flipkart has helped reduce the prevalence of counterfeit products in the market, ensuring that consumers receive genuine and high-quality items.
8. **Environmental Sustainability:** In response to environmental concerns, Flipkart has taken steps to minimise its carbon footprint. They are working on sustainable packaging, energy-efficient logistics, and responsible e-waste disposal.

In summary, Flipkart has played a significant role in solving real-world problems related to accessibility, convenience, affordability, employment, entrepreneurship, and environmental sustainability. Its e-commerce platform has transformed the retail landscape in India and has had a positive impact on various aspects of the economy and society.

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

**Problem 1: Accessibility and Convenience**

**Real-World Challenge:** In a country as vast and diverse as India, not everyone has easy access to brick-and-mortar retail stores, especially in remote and underserved areas. Shopping can be a time-consuming and inconvenient experience for many.

**Flipkart Solution:** Flipkart recognized the need to provide accessibility and convenience to consumers. Its e-commerce platform has made it possible for people across India, even in remote areas, to access a wide range of products with just a few clicks. Flipkart's user-friendly app and website have brought the convenience of online shopping to millions of Indians.

**Problem 2: Product Variety and Choice**

**Real-World Problem:** Traditional retail stores, especially in smaller towns and rural areas, often have limited product variety and choices. Consumers may not have access to the latest trends and a diverse range of products.

**Flipkart Solution:** Flipkart's online marketplace offers a massive catalog of products, ranging from electronics and fashion to household goods and groceries. This has empowered consumers with an extensive array of choices, ensuring that they can find products that suit their preferences and needs.

**Problem 3: Price Transparency and Savings**

**Real-World Problem:** Many consumers in India are price-conscious and look for discounts and savings on their purchases. Traditional retailers may not always provide transparent pricing and cost-effective options.

**Flipkart Solution:** Flipkart frequently offers discounts, deals, and competitive pricing. Its "Big Billion Days" and other sales events have become highly anticipated for shoppers seeking savings. Flipkart's platform provides price comparisons and product reviews, helping consumers make informed decisions about their purchases.

**Problem 4: Economic Empowerment**

**Real-World Problem:** Empowering small and local businesses is essential for economic growth. However, many such businesses struggle to reach a broader customer base.

**Flipkart Solution:** Flipkart's platform allows small and local businesses to sell their products to a wider audience. By providing them with an e-commerce platform, Flipkart promotes entrepreneurship, creates economic opportunities, and contributes to the growth of local businesses.

**Problem 5: Job Creation**

**Real-World Problem:** Job creation is a pressing concern, especially in a country with a significant working-age population. Many people are in need of employment opportunities.

**Flipkart Solution:** Flipkart's operations have generated a multitude of job opportunities. This includes employment for delivery personnel, sellers, customer service representatives, and various other professionals. By doing so, Flipkart has made a significant contribution to job creation in India.

**Problem 6: Sustainability and Environmental Impact**

**Real-World Problem:** The environmental impact of e-commerce, including packaging waste and transportation emissions, is a growing concern in India.

**Flipkart Solution:** Flipkart is actively working on sustainability initiatives, including responsible packaging, energy-efficient logistics, and e-waste management. These efforts aim to minimise the environmental footprint of e-commerce and contribute to a more sustainable future.

### **Top Features of Linkedin:**

* **Extensive Product Catalogue:** Flipkart boasts an extensive catalogue of products, ranging from electronics and fashion to home goods and groceries. Customers can find a wide variety of products to suit their needs.
* **User-Friendly Interface:** The platform offers a user-friendly and intuitive interface, making it easy for customers to browse, search for products, and complete transactions.
* **Search and Filter Options:** Customers can use advanced search and filtering options to find specific products, brands, and price ranges, streamlining the shopping process.
* **Customer Reviews and Ratings:** Flipkart provides customer reviews and ratings for products, allowing shoppers to make informed purchasing decisions based on the experiences of others.
* **Wishlist:** Customers can create wishlists to save products they are interested in for future reference, making it easier to track and purchase desired items.
* **Flipkart Plus:** Flipkart Plus is a loyalty program that offers various benefits, including early access to sales, free and faster shipping, and exclusive rewards for members
* **Seller Reviews and Ratings:** Customers can view seller reviews and ratings to assess the reliability and reputation of individual sellers on the platform.
* **Easy Returns and Refunds:** Flipkart provides a hassle-free returns and refunds process, allowing customers to return products that do not meet their expectations.

### **Schema Description and Design :**

The schema for flipkart involves multiple entities that represent different aspects of the platform. Each entity has specific attributes that describe its properties and relationships with other entities

**Customer:**

Information about each user

* **customer\_Id:** the unique id to identify the user.
* **first\_name:** the first name of the consumer.
* **last\_name:** the last name of the consumer.
* **Mobile:** the mobile number of the user. It is used for registration and login purposes.
* **Email:** the email of the user. It is used for login purposes
* **Password:** the password of the consumer.
* **Address:** the address of the consumer.

**Cart:**

* **Cart\_id:** the unique id to identify the cart.
* **Quantity:** the quantity of the product selected by the user.

**Wishlist:**

* **Wishlist\_id:** the unique id to identify the wishlist.

**Product:**

Data about products available

* **Product\_Id:** the unique id to identify the product.
* **SKU:** the stock unit product of the product.
* **description:** the description displays the features of product.
* **Stock:** the stock shows the number of quantities available.
* **Price:** the final price of product

**Category:**

* **category\_id :** the unique id to identify the category of a product.
* **Name :** the name of the category of product.

**Order:**

* **Order\_id :** the unique id to identify the order.
* **Order\_date:** the order date/time of the ordered product.
* **Total\_price:** total amount payable for the product.

**Order\_Item:**

* **order\_item\_Id:** the unique id to identify the order item.
* **Quantity:** the quantity of the product selected by the user.
* **Price:** price of the product.

**Payment:**

* **payment\_Id:** the unique id to identify the payment id.
* **payment\_date:** the payment date displays the date on which the payment made.
* **Payment method:** payment method displays the method through which payment made.
* **amount:** the total price of the product including shipping cost and excluding discount.

**Shipment :**

* **shipment\_Id:**  the unique id is to identify the shipment.
* **shipment\_date:** the date of shipment.
* **address:** the address to which the shipment was made..
* **City:** the city of shipment address.
* **State:** the state of shipment address.
* **Zip\_code:** the zip code of shipment address.

**Relationships are:**

* **Customer select product –** Each user can select multiple products.
* **Customer Cart –** Users can add all the details.
* **Customer wishlist -** Users can add item to the wishlist.
* **Customer payment -** Users can make the payment.
* **Customer product –** Users get details about the product.
* **Customer category-** Users choose the category of the product.
* **Customer place Order–** Users can place an order
* **Customer shipment-** Users add all the shipment details.

**ER Diagram:**

Let's construct an ER diagram that exactly portrays the relationships and attributes of the entities within the flipkart schema.

