**General E-commerce :**

is the buying and selling of goods and services online. Its primary purpose is to provide convenience to consumers by allowing them to shop from anywhere, while helping businesses reach a larger audience and streamline their sales process.

**Business Goal of E-commerce :**

The main goal of e-commerce is to increase sales, reach a wider audience, and improve customer experience by offering a convenient, accessible, and efficient way to buy and sell products or services online.

Problem Solved by E-commerce :

E-commerce solves the problem of limited market reach, high operational costs, and inconvenience of traditional shopping by enabling businesses to sell globally, reducing the need for physical stores, and providing customers with easy access to products from anywhere at any time.

Target Audience for E-commerce :

Tech-Savvy Shoppers :

People who are comfortable with technology and prefer the convenience of shopping from their phones or computers, often searching for quick purchases, deals, or specific products.

Busy Individuals :

Those with tight schedules who want to save time by shopping online instead of visiting physical stores. This includes professionals, parents, and students.

Global Consumers :

E-commerce breaks geographical barriers, so it targets customers worldwide, offering access to international products and services that they might not find locally.

Price-Sensitive Shoppers :

People who compare prices easily online, looking for discounts, offers, or the best deals available in the market.

Specific Niche Groups:

E-commerce platforms often cater to particular interest groups, like fitness enthusiasts, gamers, or fashion lovers, offering specialized products tailored to their needs.

In short, e-commerce targets anyone who values convenience, variety, and ease of access to products, whether they’re tech-savvy or simply looking for a more efficient shopping experience.

**What products are offered in e-commerce?**

**Products Offered in E-commerce:**

1. **Physical Goods:**
   1. **Electronics:** Smartphones, laptops, gadgets, home appliances.
   2. **Fashion:** Clothing, shoes, accessories, jewelry.
   3. **Beauty & Health:** Skincare, makeup, wellness products.
   4. **Home Goods:** Furniture, decor, kitchenware, bedding.
   5. **Books & Media:** E-books, physical books, music, movies.
   6. **Groceries & Essentials:** Food, beverages, cleaning products.

commerce platforms offer a wide variety of physical products that cater to everyday needs, entertainment, personal care, and more.

The **e-commerce marketplace schema** is a structure or framework used to organize and represent data in an e-commerce platform, specifically for marketplace platforms where multiple vendors or sellers can list their products. This schema outlines how the different elements of the marketplace are structured and how data is interrelated.

### Basic E-commerce Marketplace Schema Components:

**Users**

* 1. **User\_ID** (Primary Key)
  2. **Name**
  3. **Email**
  4. **Password**
  5. **Role** (Admin, Seller, Buyer)
  6. **Address**
  7. **Phone Number**

**Products**

* 1. **Product\_ID** (Primary Key)
  2. **Seller\_ID** (Foreign Key linked to Users table)
  3. **Name**
  4. **Description**
  5. **Price**
  6. **Category**
  7. **Stock Quantity**
  8. **Product Images**
  9. **Rating**
  10. **Discounts/Offers**
  11. **Created\_At**

**Categories**

* 1. **Category\_ID** (Primary Key)
  2. **Category\_Name**
  3. **Parent\_Category\_ID** (Optional, for sub-categories)

**Orders**

* 1. **Order\_ID** (Primary Key)
  2. **User\_ID** (Foreign Key linked to Users table)
  3. **Product\_ID** (Foreign Key linked to Products table)
  4. **Order\_Date**
  5. **Shipping\_Address**
  6. **Payment\_Method**
  7. **Total\_Amount**
  8. **Order\_Status** (Pending, Shipped, Delivered, Cancelled)

**Payments**

* 1. **Payment\_ID** (Primary Key)
  2. **Order\_ID** (Foreign Key linked to Orders table)
  3. **Payment\_Status** (Completed, Failed, Pending)
  4. **Payment\_Date**
  5. **Amount**
  6. **Payment\_Method** (Credit Card, PayPal, etc.)

**Reviews & Ratings**

* 1. **Review\_ID** (Primary Key)
  2. **Product\_ID** (Foreign Key linked to Products table)
  3. **User\_ID** (Foreign Key linked to Users table)
  4. **Rating**
  5. **Review\_Comment**
  6. **Created\_At**

**Shipping**

* 1. **Shipping\_ID** (Primary Key)
  2. **Order\_ID** (Foreign Key linked to Orders table)
  3. **Shipping\_Address**
  4. **Shipping\_Method**
  5. **Shipping\_Status** (In Transit, Delivered, Pending)
  6. **Tracking\_Number**
  7. **Estimated\_Delivery\_Date**

### Relationships in the Schema:

* **Users** can be **Sellers** and **Buyers** (based on the role).
* **Sellers** can have multiple **Products**.
* **Buyers** can place **Orders**, each order can contain multiple **Products**.
* **Products** are categorized under **Categories**.
* **Orders** are linked to **Payments** and **Shipping**.
* **Reviews & Ratings** are linked to **Products** and **Users**.

This schema helps in organizing the flow of information in an e-commerce marketplace and ensures smooth interaction between users, products, orders, payments, and reviews.

· **Orders:**  
A request from a customer to purchase products or services, including product details, quantity, payment, and shipping information.

· **Order Tracking:**  
A feature that allows customers to monitor the status and location of their orders in real time, from dispatch to delivery.

· **Bulk Ordering Option:**  
A feature that enables customers to purchase large quantities of a product in a single order, often with special pricing or discounts.

· **Automated Status Notification:**  
A system that automatically sends updates to customers about their order status, such as when it's confirmed, shipped, or delivered.

**Product’s :**

· **Dynamic Filters:**  
Allow users to narrow down product searches by criteria like price, brand, size, or color.

· **Real-Time Inventory Management:**  
Updates product stock levels instantly as purchases are made or inventory is replenished.

· **Custom Reviews & Ratings:**  
Enables customers to leave star ratings and written reviews for products they’ve purchased.

· **Personalized Recommendations:**  
Suggests products to users based on their browsing history, past purchases, or similar user behavior.

· **Customer:**  
A person who purchases products or services from an e-commerce platform.

· **Loyalty Program:**  
A rewards system that offers customers points, discounts, or benefits for repeat purchases and engagement with the brand.

· **Personalized Dashboard:**  
A user interface that displays customized information, such as order history, recommended products, and account details based on individual customer preferences.

· **Seamless Onboarding:**  
A smooth and user-friendly process that helps new customers quickly set up and start using an e-commerce platform with minimal friction.

· **Payments:**  
The process of completing a financial transaction for goods or services on an e-commerce platform.

· **Multiple Payment Gateways:**  
The option to use various payment processors (e.g., PayPal, Stripe, credit/debit cards) for customers to complete transactions securely.

· **Fraud Detection System:**  
A system that identifies and prevents fraudulent activities by analyzing transactions for suspicious behavior and anomalies.

· **Flexible Payment Options:**  
Offering various payment methods (e.g., installments, digital wallets, buy-now-pay-later) to give customers more ways to pay for their purchases.

· **Shipment:**  
The process of sending goods from the seller to the buyer, including packaging, transportation, and delivery.

· **Real-Time Tracking:**  
A feature that allows customers to track the exact location and status of their shipment as it moves toward delivery.

· **Courier Integration:**  
The integration of various courier services (e.g., FedEx, UPS) into the e-commerce platform to manage and streamline shipment processes.

· **Delivery Time Customization:**  
The ability for customers to choose their preferred delivery date or time window for receiving their orders.

· **Delivery Zone:**  
Geographic areas where the seller or courier service can deliver products to customers.

· **Dynamic Delivery Charges:**  
A system that calculates delivery fees based on factors such as delivery location, package size, weight, or urgency.

· **Zone Optimization:**  
The process of organizing delivery zones to maximize efficiency, reduce costs, and ensure timely deliveries.

· **ETA Updates:**  
Estimated Time of Arrival (ETA) notifications that provide customers with real-time updates on when their order will arrive.