

15-1-2025 (Wednesday) Hackathon Day #01 Task

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Day: Sunday

Time: 9:00 AM - 12:00 PM

Step # 01: Choose your Marketplace Type.

Choice: General E-commerce

Primary Purpose: The primary purpose of an e-commerce website is to facilitate the buying and selling of products or services online.

It serves as a digital marketplace, enabling businesses to reach a wider audience and providing customers with the convenience of shopping anytime and anywhere. This makes transactions faster, more efficient, and accessible in today's digital-first world.

Step # 02: Define your Business Goals

Answer these guiding questions:

Q1: What problem does your marketplace aim to solve?

Ans: A marketplace aims to solve the problem of connecting businesses with customers in a convenient and efficient way. It helps businesses expand their reach, reduce costs, and streamline operations, while providing customers with an easy-to-use platform to find, compare,

and purchase products or services from anywhere at any time.

Q2: Who is your target audience?

Ans: The target audience for a marketplace depends on the type of products or services it offers. Generally, it includes:

1. Consumers: Individuals looking for convenience, variety, and competitive pricing while shopping online.
2. Businesses: Sellers, small businesses, and brands seeking a platform to reach a larger customer base and grow their sales.
3. Niche Markets: Specific groups with unique needs, such as eco-conscious shoppers, tech enthusiasts, or hobbyists.
4. B2B clients: Companies or professionals purchasing bulk products, supplies, or specialized services.

Q3: What products or services will you offer?

Ans: The products or services offered by a marketplace will be determined by its niche and the target audience it serves. For example.

1. Physical Products: clothing, electronics, home appliances, toys, beauty products, etc.
2. Digital Products: software, e-books, music, online courses, and digital art.
3. Services: Freelance work, consulting, tutoring, graphic design, and other professional services.



4. Handmade or custom products: Unique, artisan products such as crafts, jewelry, or personalized gifts.
5. Fashion and Accessories: Clothing, footwear, handbags, jewelry, and fashion accessories.

Q4: What will set your marketplace apart (e.g., speed, affordability, customization)?

Ans: → Speed: Fast and reliable delivery services to ensure customers receive their orders promptly.

→ Affordability: Providing competitive pricing, special discounts, and exclusive deals to ensure value for money.

→ Customization: Offering personalized products and tailored recommendations based on customer preferences.

→ User-Friendly Interface: A simple, easy-to-navigate platform that enhances the shopping experience.

→ Secure Transactions: Advanced security features for safe and secure online payments.

→ Sustainability: A focus on eco-friendly products and sustainable business practices.

### Step # 03 : Create a Data Schema.

1. Identify the entities in your marketplace (e.g., Products, Orders, Customers, Delivery Zones).
  - \* Products: The items listed for sale, including details like name, description, price, availability, and category.
  - \* Orders: Customer purchases, including order details, product information, payment status, and shipping status.
  - \* Customers: Users who browse and make purchases on the marketplace, with personal information, purchase history, and preferences.
  - \* Sellers: Businesses or individuals listing products for sale, with information on their profile, inventory, and order history.
  - \* Payments: Payment transactions for orders, including payment method, status, and transaction history.
  - \* Delivery Zones: Geographical areas where products can be shipped, with information on shipping costs, delivery times, and service availability.
  - \* Reviews and Ratings: Customer feedback on products and sellers, which includes ratings, reviews, and comments.
  - \* Shopping cart: The collection of products selected by a customer before proceeding to checkout.



- Discounts and promotions: Special offers, codes, and discounts applied to products or orders.
- Inventory: The stock of products available for sale, managed by sellers and tracked by the marketplace.

### Entities:

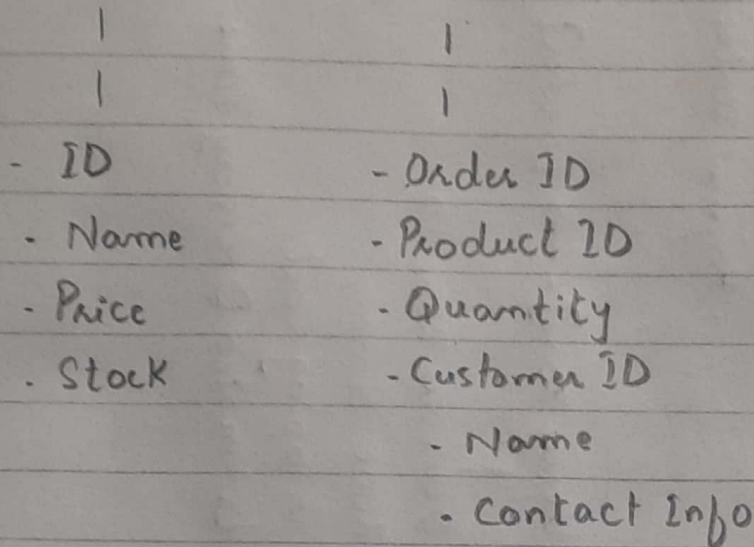
|                |                  |                           |
|----------------|------------------|---------------------------|
| 1. Product     | 4. Payment       | 6. Delivery Zone          |
| • ID           | • Payment ID     | • Delivery zone ID        |
| • Name         | • Order ID       | • zone Name               |
| • Price        | • Amount         | • Shipping Cost           |
| • Stock        | • Payment Method | • Estimated delivery Time |
| 2. Order       | • Payment Status |                           |
| • Order ID     | 5. Review        |                           |
| • Product ID   | • Review ID      |                           |
| • Quantity     | • Customer ID    |                           |
| 3. Customer    | • Product ID     |                           |
| • Customer ID  | • Rating         |                           |
| • Name         | • comment        |                           |
| • Contact info |                  |                           |

### Relationships:

- A product can appear in many Orders (many-to-many relationship).
- An Order is placed by a customer (one-to-many relationship)
- Customer can write multiple reviews for different products (one-to-many relationship).

## Schema Diagram:

[Product] ---< [Order] >--- [customer]

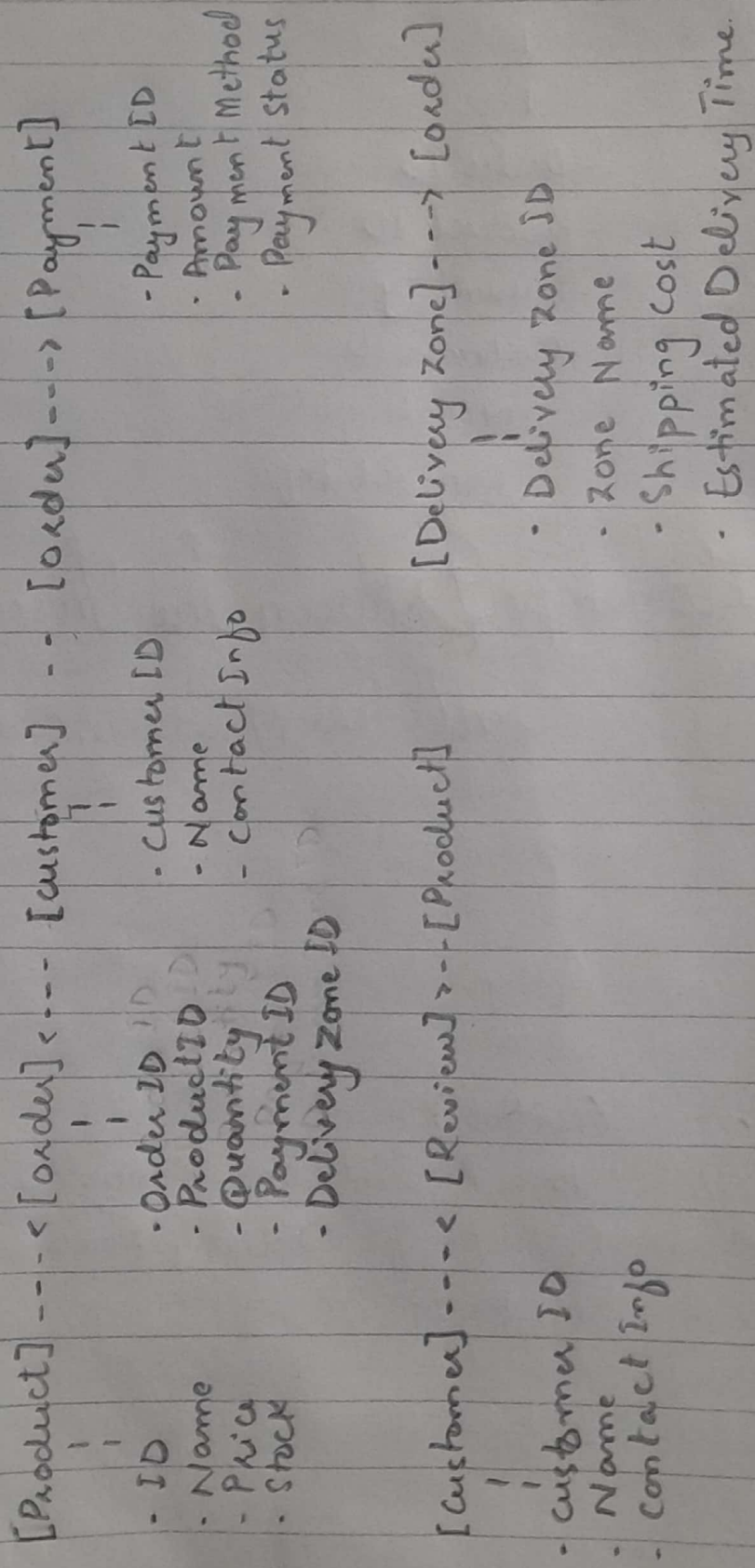


## Relationships Between The Three Core Entities (Products, Order, & Customer)

Relationships: (continue).

- Order is linked to a Payment (one-to-one relationship)
- Order references a specific Delivery Zone (one-to-one relationship)

# Schema Diagram Core Functionality





# Entity Relationship Diagram

