HACKATHON DAY 01

STEP 01: (Wed, 15-January)

Choose Your Marketplace Type.

- Marketplace Type:

    General E-Commerce (Furnitur)

- Primary Purpose:

    To sell furniture products and provide customers with an easy platform to search and purchase various types of furniture.

STEP 02:

Define Your Business Goals.

- Problem Statement:

    Offer one-step platform where customers can easily search for and purchase a variety of furniter products.

(4:45pm)

- Target Audience:

    Individuals looking to buy furniture products online.

- Products / Services:

    Various furniture products such as sofas, beds, chairs, tables and more.

- Unique Selling Point:

    Easy search options, competitive pricing, and fast delivery.

STEP 03:

Create a Data Schema.

Identify the Entities in Your Marketplace.

1) Products: Represents the furniture items being sold.

2) Orders: Represents a customer's purchase transaction.

3) Customers: Represents the customers who are making the purchases.

4) Sellers: Represents the business or individuals selling furnitur

5) Delivery Zones: Represents the geographic areas where products can be delivered. ~~the~~

6) Shipments: Represents the delivery details for each order.

7) Payments: Represents the financial transactions related to each order.

- Draw Relationships B/w Entities.

The relationships b/w entities show how they interact and are connected.

- Products ⟷ Orders:
  A product can appear in multiple orders, as the same product may be purchased by different customers.

- Orders ⟷ Customers:
  A customers can place multiple orders.

- Orders ⟷ Shipments:
  An order can have one or more shipments (especially if the order contains multiple products).

- Orders ⟷ Payments
  An order can be linked to multiple payments (e.g. installment payment).

- Shipment ⟷ Delivery Zones:
  Shipments are associated with delivery zones, as the delivery area defines where the product is sent.

- Sellers ⟷ Products:
  Sellers provide products for the marketplace. A seller can offer multiple products, and each product is linked to a specific seller.

- Focus on Key fields for Each Entity.

① Products.

- ID: Unique identifier for each product
- Name: Name of the product (e.g. sofa, Bed).
- Price: Cost per unit.
- Stock: Quantity available.

- Category : Product category (e.g, Sofas, Beds, chairs)

Tags : keywords or search terms (e.g "luxury", "New Arrival").

② Orders:

- Order ID: Unique identifier for each order.

- Customer info. Name, contact,& address of the customer.

- Product Details. List of products then quantities and prices in the order.

- Status: Order status (e.g, Pending, shipped, Delivered).

- Timestamp: Date and time when the order was placed.

- Address: Seller's business address.

5) Delivery Zones.

- Zones Name: Name or identifier of the delivery zone.

- Coverage Area: List of postal codes or cities served.

- Assigned Drivers: Details of the delivery drivers or couriers assigned to the zone.

6) Shipments.

- Shipment ID: Unique identifier for each shipment.

- Order ID: The linked order for the shipment.

- Status: Current shipment status (e.g transit, delivered).

- Delivery Date: Expected or actual delivery date.
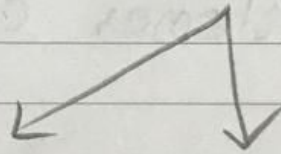
(7) Payments:

- Payment ID: Unique identifier for each payment.

- Order ID: Linked order for the payment.

- Payment Method: Method of payment (e.g. credit Card, PayPal).

- Payment Status: Payment status. (e.g~ Pending, completed).

Visualizing the Structure (Diagram)

Products		Orders.
ID		Order ID
Name		Customer info
Price	(Linked to)	Product Details
Stock		Status
Category		Timstamp.
Tags		

Customers	Payments
Customer ID	Payment ID
Name	Order ID
Contad Info	Payment Methd
Address	Payment status.
Order History	

Shipments	Delivery Zones
Shipment ID	Zone Name
Order ID	Coverage Area
Status	Assigned Drivers.
Delivery Date	

Relationship Summary:- (11:00pm)

- Product <——> Orders:

    Products can be linked to
    multiple orders (i.e, one product
    may be purchased multiple
    times.).

- Orders <——> Customers:

    A customer can have many
    orders.

- Orders <——> Shipments:

    Each order can have one
    or more shipments, depending
    on delivery logistics.

- Orders <——> Payments:

    Multiple payments can be
    made for a single order,
    especially in cases of
    installments.

- Shipments <—> Delivery Zones.

  - Shipments are linked to delivery zones, which define the geographic areas for delivery.

- Sellers <—> Products.

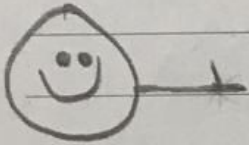 Sellers offer products each product is linked to a Seller.

STEP O5:

Ensure Flexibility for future Growth.

- Scalability: This schema is flexible enough to allow for future expansion, such as adding features like customers reviews, product ratings, discounts on promotions.

- Future Relationships: As the business grows, additional entities like product categories, inventory management, and user authentication can be added.