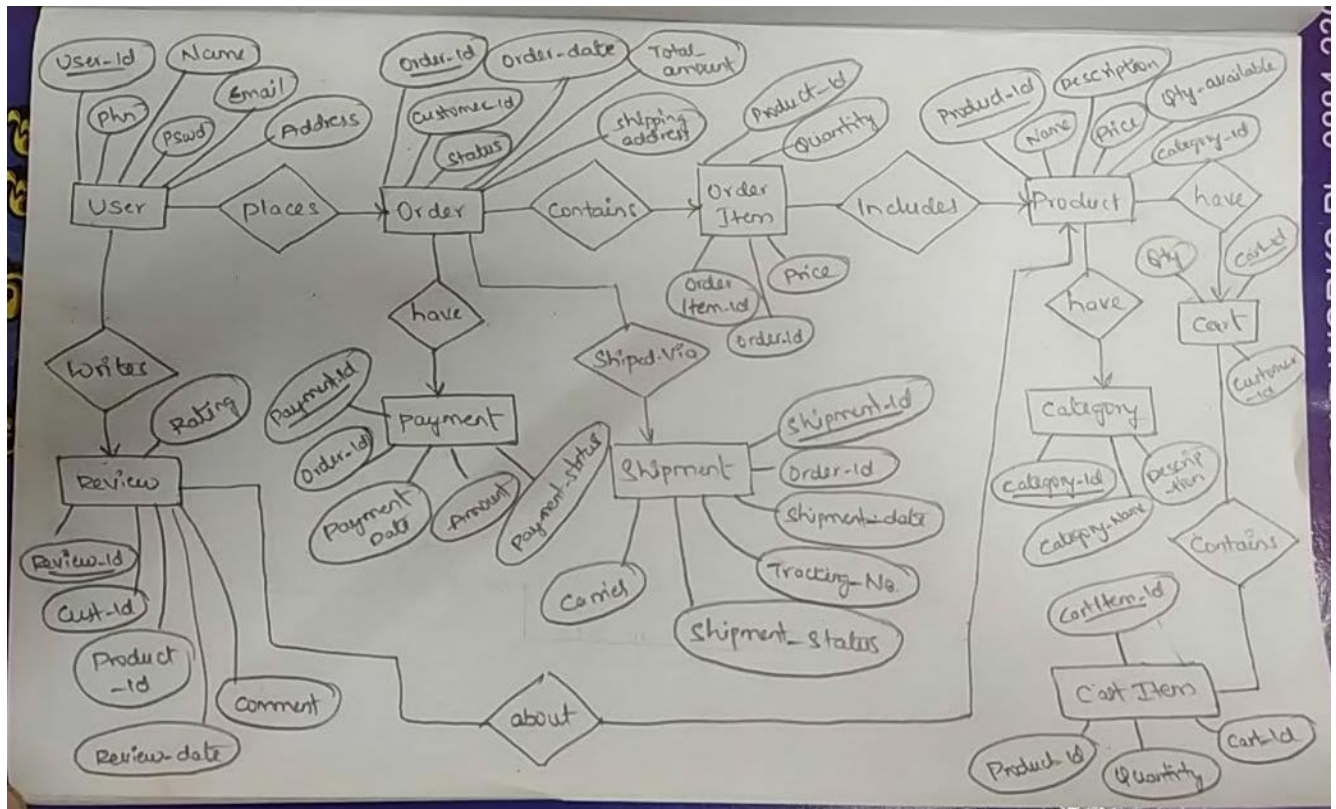# Day-1

ER Diagram of E-Commerce Application:

Entity- An entity is a real-world object, concept, or event that can be distinctly identified. Examples include a customer, a product, or an order.

Attributes- A property or characteristic of an entity. Often shown as an oval or circle.

Relationship- A relationship describes how two or more entities are connected or associated with each other.

Here, the entities are represented with Rectangle shape, and they are-

- User
- Order
- Order Item
- Product
- Cart
- Cart Item
- Category
- Payment
- Shipment
- Review

Relationships are represented with rhombus shape, and they are-

- Places
- Contains
- Includes
- Have
- Writes
- Shipped via
- Writes

Table Creation:

For User,

create table User(User_Id Int, Name varchar(20), Email varchar (20), Phone varchar(10), Address varchar(15), Password varchar(10));

For Product,

Create table Product(Product_ID Int, Name varchar(15), Description varchar(20), Price Int, Qty_Available Int, Category_Id Int);

Definitions of Primary Key and Foreign Key:

Primary Key- A primary key is a column or a set of columns in a table that uniquely identifies each record (row) in that table.

- It must contain unique values for every row and cannot contain NULL values.
- A table can have only one primary key.

Foreign Key- A foreign key is a column or a set of columns in one table that refers to the primary key of another table.

- It establishes a link or relationship between two tables, enforcing referential integrity.
- The values in the foreign key column(s) must match existing values in the referenced primary key column(s) of the other table, or they can be NULL if allowed by the constraint.
- A table can have multiple foreign keys.