

Task 1

Date:- 29/1/25

Entity Relationship diagram

Aim

To design an Entity-Relationship Diagram for a E-commerce database management system

Steps to draw ER draw

Step 1:- Identifying the main Entities

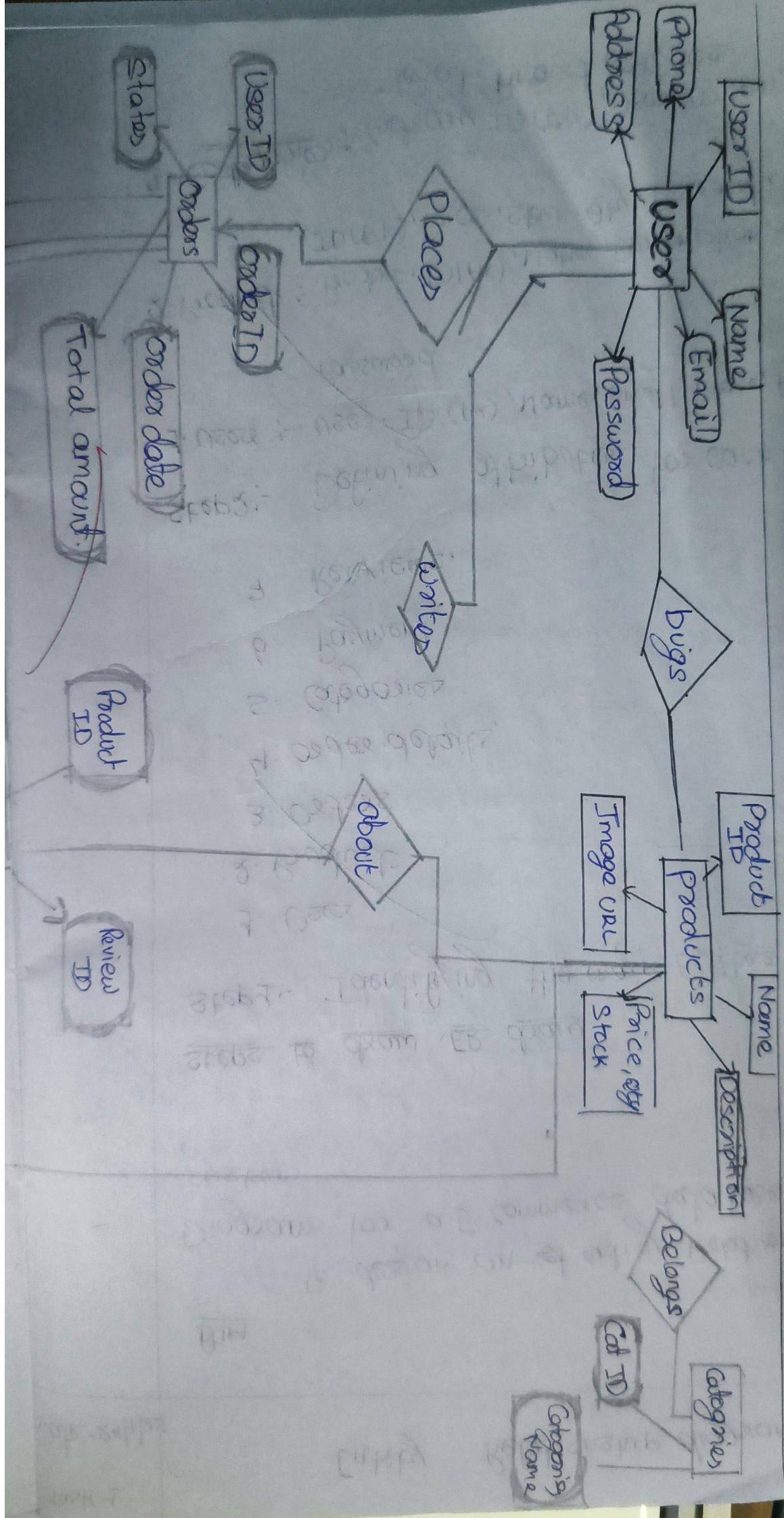
1. Users
2. Products
3. Orders
4. Order details
5. Categories
6. Payment
7. Reviews.

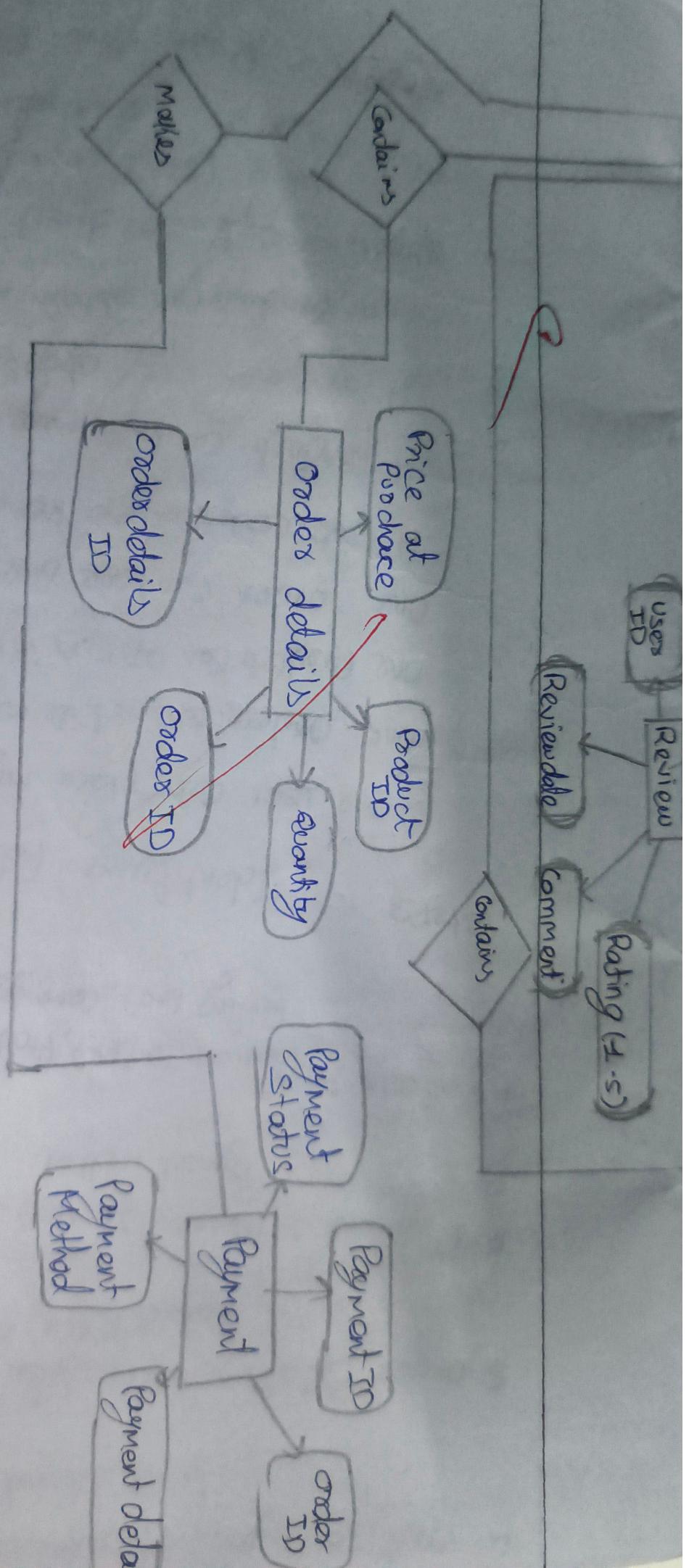
Step 2:- Defining attributes for each entity.

1. Users :- User-ID (PK), Name, Email, Phone, Address, Password.

2. Product :- Product-ID (PK), Name, Description, category ID (FK), Price, Stock Qty, Discount, image.

3. Categories :- Category ID (PK), User ID (PK), Order date, Total Amount, Status.





4. Orders :- Order ID (PK), User ID (FK), order date, Total amount, status

5. Order Details :- Order details ID (PK), Order ID (FK), Product ID (FK), Quantity, Price At Purchase

6. Payment :- Payment ID (PK), Order ID (FK), Payment date, Payment method.

7. Reviews :- Review ID (PK), Product ID (PK), User ID (FK), Rating (1 to 5), Comment, Review date

Step 3 :- Identifying Relationship entities

One user can place many orders (1-to-many)

One Order can include many products (1 to many)

One Product can appear in many orders (1 to many)

One order can have one payment (1 to 1)

A user can write many reviews (1 to many)

A product can have many reviews (1 to many)

A review is about a product (many to one)

One product can obtain multiple products (1 to many)

Step 4 :- Set cardinalities

Using (1:1), (1:N) and (N:1) to indicate how many instances are involved.

Step 5 :- Draw the ER diagram.

open draw.io website

draw diagram using

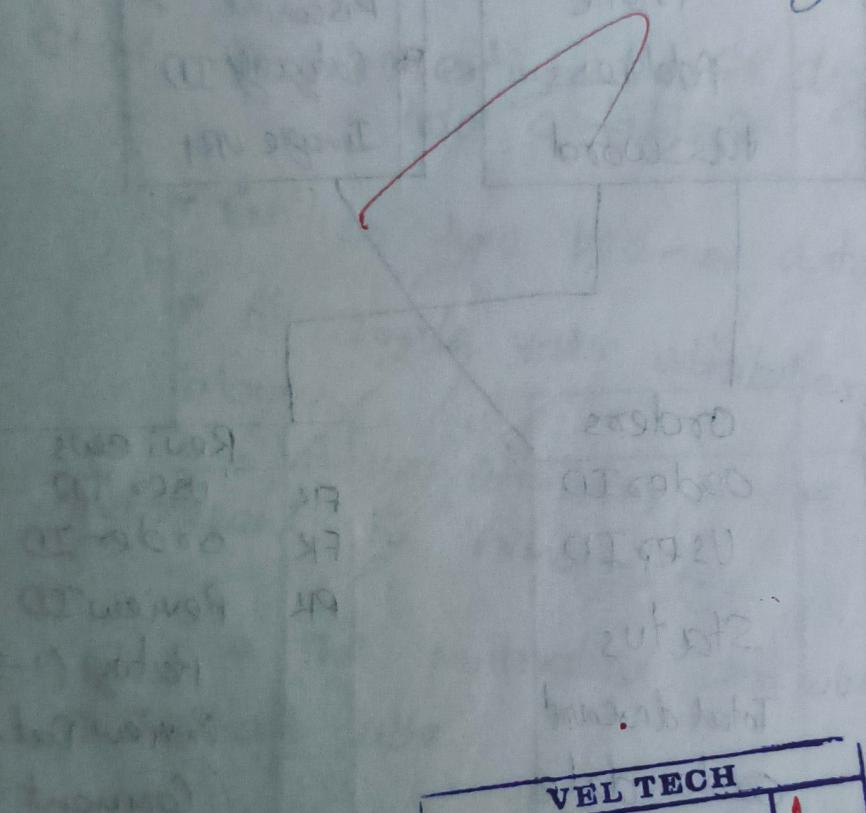
Rectangle for entities

Ellipse for attributes

Diamonds for relationships

lines to connect them

Underline Primary Key.



VEL TECH	
EX NO.	1
PERFORMANCE (5)	8
RESULT AND ANALYSIS (5)	3
VIVA VOCE (5)	—
RECORD (5)	13
TOTAL (20)	13
SIGN WITH DATE	C

Results

Hence the Entity-Relationship diagram at database management system drawn using draw.io

Categories	
PK	Category - ID
	Category Name

User		Products	
PK	User - ID	PK	Product ID
	Name		Name
	Email		Description
	Phone		Price, Stock, Qty
	Address		Discount
	Password	FK	Category ID
			Image URL

Orders		Reviews	
FK	User ID	FK	User ID
FK	order ID	FK	order ID
	Status	PK	Review ID
	Total discount		Rating (1-5)
	Order date		Review Date
			Comment

order detail		Payments	
PK	Product ID	PK	Payment ID
FK	order ID	FK	order ID
	order detail	PK	Payment Status
	Quantity		Payment method
	Price at Purch.		Payment details

Task No: 1.1 Convert ER diagram into
Date: 29/7/25 Relationship Model

AIM:

To convert an ER diagram into a Relationship Model for a E-commerce database management system.

Steps for converting the ER diagram into a table

- * Entities type becomes a table
- * All single value attributes becomes columns
- * A key attribute of the entity type represent by Primary key.
- * The multivalued attribute is represented by separate table.

* Composite attributes represents by components

* Derived attributes are not considered in the table using these rules
Convert ER diagram to tables you
columns and assign table.
Table structure for VEL TECH given below.

EX NO.	5
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOICE (5)	3
RECORD (5)	13
TOTAL (20)	20

Result:

The conversion of an ~~sign with date~~ diagram into a

relationship model for a e-commerce database management system was successfully drawn. 28/7/25