Department of Computer Science and Engineering

National Institute of Technology, Warangal

DBMS PROJECT-

E-COMMERCE DATABASE

PREPARED BY-

1. P.Varsha janaki(22CSB0C41)

B.TECH CSE-B

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PROBLEM STATEMENT

Design a database system for an e-commerce platform that facilitates customer transactions, including browsing products, adding them to a shopping cart, placing orders, and making payments. The system should also manage product categorization, seller details, warehouse inventory, and order tracking

OUR THOUGHT PROCESS:

Identify the main entities: Customers, Addresses, Carts, Products, Categories, Sellers, Warehouses, Orders, Order Items, and Payments.
Determine attributes for each entity, including primary keys, derived attributes, and multi-valued attributes.
Define relationships between entities based on the given requirements and establish cardinality and participation constraints.
Design tables to represent entities and relationships, ensuring normalization and referential integrity.

WORKFLOW STAGES IN E-COMMERCE SYSTEM

1. **Customer Registration:**
   A new customer registers with the e-commerce platform by providing personal details such as name, email, and contact number.

2. **Browsing Products:**
   The customer logs in and browses through the available products categorized by different categories.

3. **Adding Products to Cart:**
   The customer selects desired products and adds them to their shopping cart.

4. **Placing Order:**
   After finalizing the selection, the customer proceeds to place an order, providing necessary details such as shipping address and payment information.

5. Order Processing:
The order details are processed, and the system calculates the order amount based on product prices and quantity.

6. Order Fulfillment:
The order is forwarded to the respective seller(s) who manage the product(s) included in the order.

7. Payment Transaction:
The customer completes the payment transaction using the chosen payment mode.

8. Order Shipping:
The seller prepares the order for shipping, and the tracking details are generated.

9. Delivery Confirmation:
The order is delivered to the customer at the provided address.

10, feedback and Review:
The customer may provide feedback or review about the purchased products and overall shopping experience.

ENTITY RELATIONSHIPS:

1. Customer stays at an Address (Many-to-Many)
Each customer can have multiple addresses (e.g., home, work), and each address can be associated with multiple customers (e.g., family members living at the same address).

2. Customer shops Cart (One-to-Many)
Each customer can have multiple shopping carts, allowing them to create separate carts for different purposes or sessions.

3. Cart contains Products (One-to-Many)
Each cart can contain multiple products, enabling customers to add multiple items to their cart for purchase.

4. Products categorize Category (One-to-Many)
Each product belongs to a single category, allowing products to be organized and classified into different categories for easier navigation and search.

5. Products are sold by Seller (One-to-Many)
Each product is sold by a single seller, indicating the relationship between products and the sellers who offer them for sale.

6. Seller supplies to Warehouse (One-to-Many)
Each seller can supply products to multiple warehouses, indicating the distribution of products from sellers to warehouses for storage and management.

7. Order takes from Warehouse (One-to-Many)
Each order is fulfilled by products taken from a single warehouse, indicating the source of the products included in the order.

8. Order has Trackingdetails (One-to-One)
Each order has tracking details associated with it, providing information about the shipment and delivery status of the order.

9. Products include Orderitems (One-to-Many)
Each product includes multiple order items, representing the specific instances of the product included in different orders.

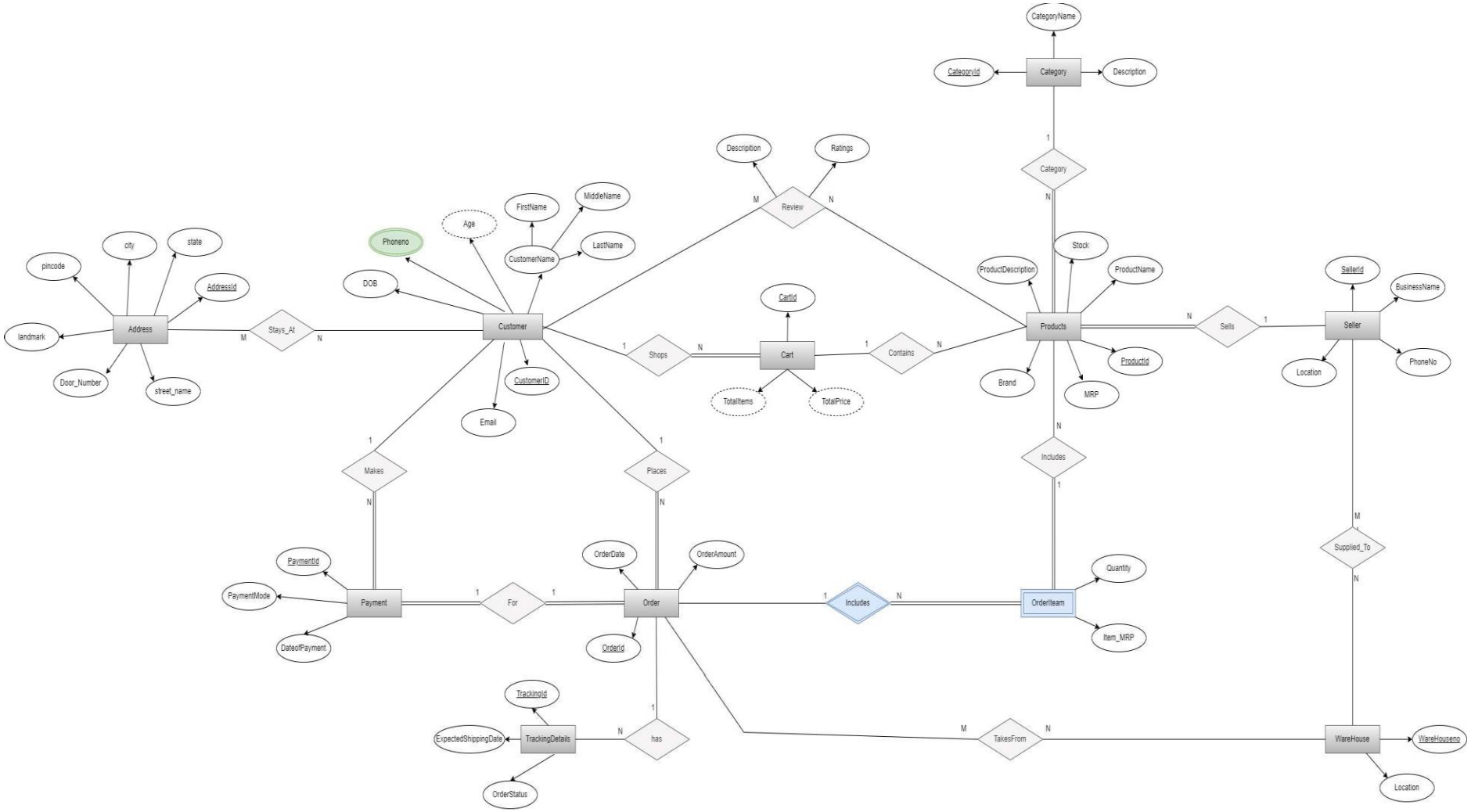
10. Order includes (Weak) Orderitem (One-to-Many)
Each order includes multiple order items, which are weak entities representing the specific products and quantities ordered within the order.

11. Customer places Order (One-to-Many)
Each customer can place multiple orders, indicating the ability of customers to make multiple purchases over time.

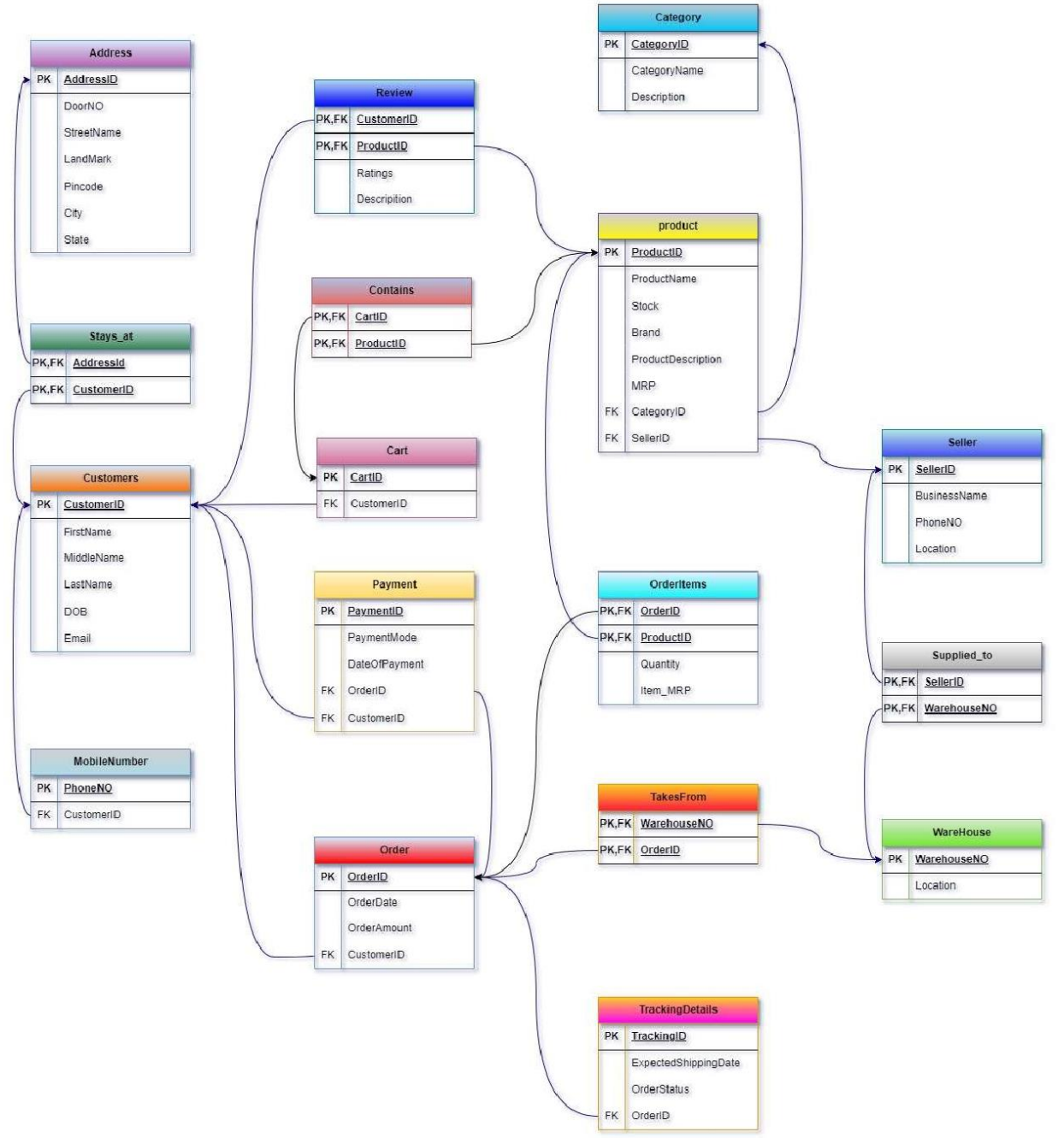
12. Customer makes Payment (One-to-Many)
Each customer can make multiple payments, reflecting the possibility of customers making payments for multiple orders or transactions.

13. Payment is for Order (One-to-One)
Each payment is associated with a single order, indicating that payments are made for specific orders placed by customers.

ENTITY-RELATIONSHIP DIAGRAM:



RELATIONAL SCHEMA:



FUNCTIONAL DEPENDENCIES AFTER NORMALIZATION:

- AddressID -> AddressID,DoorNo,StreetName,LandMark,Pincode,City,State
- CustomerID -> CustomerID,FirstName,MiddleName,LastName,DOB,Email
- AddressID -> AddressID, CustomerID
- PhoneNo,CustomerID -> PhoneNo,CustomerID
- CustomerID,ProductID -> CustomerID,ProductID,Rating,Description
- CartID,ProductID -> CartID,ProductID
- CartID -> CartID,CustomerID
- PaymentID -> PaymentID,OrderID,CustomerID,PaymentMode,DateOfPayment
- OrderID -> OrderID,CustomeID,OrderDate,OrderAmount
- CategoryID->CategoryID,CategoryName,Description
- ProductID ->ProductID,CategoryID,SellerID,
  ProductName,Stock,Brand,ProductDescription,MRP
- OrderID,ProductID -> OrderID,ProductID,Quantity,Item_MRP
- WarehouseNO,OrderID -> WarehouseNO,OrderID
- TrackingID,OrderID -> TrackingID,OrderID,ExpectedShippingDate,OrderStatus
- SellerID -> SellerID,BusinessName,PhoneNO,Location
- SellerID,WarehouseNO -> SellerID,WarehouseNO
- WarehouseNO -> WarehouseNO,Location

TABLE CREATION AND INSERTION:-

```
CREATE TABLE Address
(
    AddressID INT,
    DoorNO INT,
    StreetName VARCHAR(100),
    LandMark VARCHAR(100),
    Pincode INT,
    City VARCHAR(100),
    State VARCHAR(100),
    PRIMARY KEY(AddressID)
);

INSERT INTO Address
VALUES (17, 305, 'Main Street', 'Near Park', 123456, 'Cityville',
'Alabama');

INSERT INTO Address
VALUES (29, 102, 'Broadway', 'Near Mall', 654321, 'Townville', 'Alaska');

INSERT INTO Address
VALUES (34, 407, 'Oak Avenue', 'Near School', 987654, 'Villageville',
'Arizona');

INSERT INTO Address
VALUES (42, 510, 'Maple Street', 'Near Hospital', 741852, 'Hamletville',
'Arkansas');

INSERT INTO Address
VALUES (56, 213, 'Elm Avenue', 'Near Library', 369258, 'Suburbia',
'California');

INSERT INTO Address
VALUES (63, 619, 'Pine Street', 'Near Stadium', 582369, 'Metrocity',
'Colorado');
```

```
INSERT INTO Address
VALUES (72, 728, 'Cedar Avenue', 'Near Theater', 486753, 'Uptown',
'Connecticut');

INSERT INTO Address
VALUES (85, 825, 'Birch Street', 'Near Beach', 951357, 'Downtown',
'Delaware');

INSERT INTO Address
VALUES (91, 930, 'Aspen Avenue', 'Near River', 357951, 'Ruralville',
'Florida');

INSERT INTO Address
VALUES (98, 1031, 'Willow Street', 'Near Airport', 159753,'Villatown',
'Georgia');
```

Address table:-

ADDRESSID	DOORNO	STREETNAME	LANDMARK	PINCODE	CITY	STATE
17	305	Main Street	Near Park	123456	Cityville	Alabama
29	102	Broadway	Near Mall	654321	Townville	Alaska
34	407	Oak Avenue	Near School	987654	Villageville	Arizona
42	510	Maple Street	Near Hospital	741852	Hamletville	Arkansas
56	213	Elm Avenue	Near Library	369258	Suburbia	California
63	619	Pine Street	Near Stadium	582369	Metrocity	Colorado
72	728	Cedar Avenue	Near Theater	486753	Uptown	Connecticut
85	825	Birch Street	Near Beach	951357	Downtown	Delaware
91	930	Aspen Avenue	Near River	357951	Ruralville	Florida
98	1031	Willow Street	Near Airport	159753	Villatown	Georgia

```
CREATE TABLE Customers
(
    CustomerID INT,
    FirstName VARCHAR(100),
    MiddleName VARCHAR(100),
    LastName VARCHAR(100),
    DOB DATE,
    email VARCHAR(100),
    PRIMARY KEY(CustomerID)
);

INSERT INTO Customers
VALUES (5001, 'John', 'A', 'Doe', TO_DATE('1990-05-15', 'YYYY-MM-DD'),
'john.doe@example.com');

INSERT INTO Customers
VALUES (5002, 'Jane', 'B', 'Smith', TO_DATE('1985-10-20', 'YYYY-MM-DD'),
'jane.smith@example.com');

INSERT INTO Customers
VALUES (5003, 'Alice', 'C', 'Johnson', TO_DATE(, '1995-02-28', 'YYYY-MM-
DD'),'alice.johnson@example.com');

INSERT INTO Customers
VALUES (5004, 'Bob', 'D', 'Williams', TO_DATE('1980-12-10', 'YYYY-MM-
DD'), 'bob.williams@example.com');

INSERT INTO Customers
VALUES (5005, 'Charlie', 'E', 'Brown', TO_DATE( '1998-07-04', 'YYYY-MM-
DD'), 'charlie.brown@example.com');

INSERT INTO Customers
VALUES (5006, 'Emma', 'F', 'Garcia', TO_DATE('1987-09-30', 'YYYY-MM-DD'),
'emma.garcia@example.com');
```

```
INSERT INTO Customers
VALUES (5007, 'David', 'G', 'Martinez', TO_DATE('1993-03-18', 'YYYY-MM-DD'), 'david.martinez@example.com');

INSERT INTO Customers
VALUES (5008, 'Olivia', 'H', 'Lopez', TO_DATE('1982-11-25', 'YYYY-MM-DD'), 'olivia.lopez@example.com');


INSERT INTO Customers
VALUES (5009, 'James', 'I', 'Lee', TO_DATE('1997-04-12', 'YYYY-MM-DD'), 'james.lee@example.com');

INSERT INTO Customers
VALUES (5010, 'Sophia', 'J', 'Young', TO_DATE('1989-08-22', 'YYYY-MM-DD'), 'sophia.young@example.com');
```

Customers table:-

CUSTOMERID	FIRSTNAME	MIDDLENAME	LASTNAME	DOB	EMAIL
5001	John	A	Doe	1990-05-15	john.doe@example.com
5002	Jane	B	Smith	1985-10-20	jane.smith@example.com
5003	Alice	C	Johnson	1995-02-28	alice.johnson@example.com
5004	Bob	D	Williams	1980-12-10	bob.williams@example.com
5005	Charlie	E	Brown	1998-07-04	charlie.brown@example.com
5006	Emma	F	Garcia	1987-09-30	emma.garcia@example.com
5007	David	G	Martinez	1993-03-18	david.martinez@example.com
5008	Olivia	H	Lopez	1982-11-25	olivia.lopez@example.com
5009	James	I	Lee	1997-04-12	james.lee@example.com
5010	Sophia	J	Young	1989-08-22	sophia.young@example.com

```
CREATE TABLE Stays_at
(
    AddressID INT,
    CustomerID INT,
    PRIMARY KEY(AddressID,CustomerID),
    FOREIGN KEY (AddressID) REFERENCES Address(AddressID),
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

);

INSERT INTO Stays_at VALUES (17, 5001);

INSERT INTO Stays_at VALUES (29, 5002);

INSERT INTO Stays_at VALUES (34, 5003);

INSERT INTO Stays_at VALUES (42, 5004);

INSERT INTO Stays_at VALUES (56, 5005);

INSERT INTO Stays_at VALUES (63, 5006);

INSERT INTO Stays_at VALUES (72, 5007);

INSERT INTO Stays_at VALUES (85, 5008);

INSERT INTO Stays_at VALUES (91, 5009);

INSERT INTO Stays_at VALUES (98, 5010);
```

Stays_at table:-

ADDRESSID	CUSTOMERID
17	5001
29	5002
34	5003
42	5004
56	5005
63	5006
72	5007
85	5008
91	5009
98	5010

```
CREATE TABLE MobileNumber
(
   PhoneNO INT,
   CustomerID INT,
   PRIMARY KEY(PhoneNO),
   FOREIGN KEY(CustomerID) REFERENCES Customers(CustomerID)
 );
```

```
INSERT INTO MobileNumber VALUES (9234567890, 5001);

INSERT INTO MobileNumber VALUES (8345678901, 5002);

INSERT INTO MobileNumber VALUES (9456789012, 5003);

INSERT INTO MobileNumber VALUES (6567890123, 5004);

INSERT INTO MobileNumber VALUES (9678901234, 5005);

INSERT INTO MobileNumber VALUES (7789012345, 5006);

INSERT INTO MobileNumber VALUES (7890123456, 5007);

INSERT INTO MobileNumber VALUES (8901234567, 5008);

INSERT INTO MobileNumber VALUES (9012345678, 5009);

INSERT INTO MobileNumber VALUES (9876543210, 5010);
```

MobileNumber table:-

PHONENO	CUSTOMERID
9234567890	5001
8345678901	5002
9456789012	5003
6567890123	5004
9678901234	5005
7789012345	5006
7890123456	5007
8901234567	5008
9012345678	5009
9876543210	5010

```
CREATE TABLE Review
 (
      CustomerID INT,
      ProductID INT,
      Ratings INT,
      Description VARCHAR(255),
      PRIMARY KEY(CustomerID,ProductID),
      FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID),
      FOREIGN KEY(ProductID) REFERENCES Product(ProductID)
);
INSERT INTO Review
VALUES (5001, 987651, 4, 'Good product.');


INSERT INTO Review
VALUES (5002, 543222, 5, 'Excellent service!');

INSERT INTO Review
VALUES (5003, 123463, 3, 'Average quality.');

INSERT INTO Review
VALUES (5004, 678614, 2, 'Poor packaging.');

INSERT INTO Review
VALUES (5005, 336575, 4, 'Fast delivery.');

INSERT INTO Review
VALUES (5006, 873556, 5, 'Highly recommended.');

INSERT INTO Review
VALUES (5007, 341687, 3, 'Could be better.');

INSERT INTO Review
VALUES (5008, 12346, 4, 'Satisfied with the purchase.');

INSERT INTO Review
VALUES (5009, 243244, 5, 'Great experience!');
```

```
INSERT INTO Review
VALUES (5010, 423471, 4, 'Happy with the product.');
```

Review table:-

CUSTOMERID	PRODUCTID	RATINGS	DESCRIPTION
5001	987651	4	Good product.
5002	543222	5	Excellent service!
5003	123463	3	Average quality.
5004	678614	2	Poor packaging.
5005	336575	4	Fast delivery.
5006	873556	5	Highly recommended.
5007	341687	3	Could be better.
5008	12346	4	Satisfied with the purchase.
5009	243244	5	Great experience!
5010	423471	4	Happy with the product.
5001	98765	4	Good product.
5002	54321	5	Excellent service!
5003	12345	3	Average quality.
5004	67890	2	Poor packaging.
5005	23456	4	Fast delivery.
5007	54322	3	Could be better.

```
CREATE TABLE Contains
 (
       CartID INT,
       ProductID INT,
       PRIMARY KEY(CartID,ProductID),
       FOREIGN KEY (CartID) REFERENCES Cart(CartId),
       FOREIGN KEY(ProductID) REFERENCES Product(ProductID)
 );


 INSERT INTO Contains VALUES (2001, 987651);

 INSERT INTO Contains VALUES (2002, 543222);

 INSERT INTO Contains VALUES (2003, 123463);

 INSERT INTO Contains VALUES (2004, 678614);

 INSERT INTO Contains VALUES (2005, 336575);

 INSERT INTO Contains VALUES (2006, 873556);

 INSERT INTO Contains VALUES (2007, 341687);

 INSERT INTO Contains VALUES (2008, 879681);

 INSERT INTO Contains VALUES (2009, 243244);

 INSERT INTO Contains VALUES (2010, 423471);
```

Contains table:-

CARTID	PRODUCTID
2001	987651
2002	543222
2003	123463
2004	678614
2005	336575
2006	873556
2007	341687
2008	879681
2009	243244
2010	423471

```
CREATE TABLE Cart
 (
   CartID INT,
   CustomerID INT,
   PRIMARY KEY(CartID),
   FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);


INSERT INTO Cart VALUES (2001, 5001);

INSERT INTO Cart VALUES (2002, 5002);

INSERT INTO Cart VALUES (2003, 5003);

INSERT INTO Cart VALUES (2004, 5004);

INSERT INTO Cart VALUES (2005, 5005);

INSERT INTO Cart VALUES (2006, 5006);

INSERT INTO Cart VALUES (2007, 5007);

INSERT INTO Cart VALUES (2008, 5008);

INSERT INTO Cart VALUES (2009, 5009);

INSERT INTO Cart VALUES (2010, 5010);
```

Cart table:-

CARTID	CUSTOMERID
2001	5001
2002	5002
2003	5003
2004	5004
2005	5005
2006	5006
2007	5007
2008	5008
2009	5009
2010	5010

```
CREATE TABLE Payment
(
      PaymentID INT,
      PaymentMode VARCHAR(100),
      DateOfPayment DATE,
      OrderID INT,
       CustomerID INT,
      PRIMARY KEY(PaymentID),
      FOREIGN KEY (OrderID) REFERENCES Order(OrderID),
      FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);


INSERT INTO Payment
VALUES (3546, 'Credit Card', TO_DATE('2024-05-01', 'YYYY-MM-DD'),
301, 5001);

INSERT INTO Payment
VALUES (2154, 'Cash on Delivery',  TO_DATE('2024-05-02', 'YYYY-MM-DD'),
312, 5002);

INSERT INTO Payment
VALUES (8712, 'Online Banking', TO_DATE('2024-05-03', 'YYYY-MM-DD'),
324, 5003);

INSERT INTO Payment
VALUES (6983, 'Debit Card', TO_DATE('2024-05-04', 'YYYY-MM-DD'),
335, 5004);

INSERT INTO Payment
VALUES (9427, 'Credit Card', TO_DATE('2024-05-05', 'YYYY-MM-DD'),
 346, 5005);

INSERT INTO Payment
VALUES (5842, 'Cash on Delivery'TO_DATE(, '2024-05-06', 'YYYY-MM-DD'),
357, 5006);
```

```
INSERT INTO Payment
VALUES (3765, 'PayPal', TO_DATE('2024-05-07', 'YYYY-MM-DD'),
368, 5007);

INSERT INTO Payment
VALUES (1289, 'Online Banking', TO_DATE('2024-05-08', 'YYYY-MM-DD'),
379, 5008);

INSERT INTO Payment
 VALUES (4931, 'Debit Card', TO_DATE('2024-05-09', 'YYYY-MM-DD'), 380,
5009);

INSERT INTO Payment
 VALUES (6752, 'Credit Card', TO_DATE('2024-05-10', 'YYYY-MM-DD'), 391,
5010);
```

Payment table:

PAYMENTID	PAYMENTMODE	DATEOFPAYMENT	ORDERID	CUSTOMERID
3546	Credit Card	2024-05-01	301	5001
2154	Cash on Delivery	2024-05-02	312	5002
8712	Online Banking	2024-05-03	324	5003
6983	Debit Card	2024-05-04	335	5004
9427	Credit Card	2024-05-05	346	5005
5842	Cash on Delivery	2024-05-06	357	5006
3765	PayPal	2024-05-07	368	5007
1289	Online Banking	2024-05-08	379	5008
4931	Debit Card	2024-05-09	380	5009
6752	Credit Card	2024-05-10	391	5010

```
CREATE TABLE Order
 (
       OrderID INT,
       OrderDate DATE,
       OrderAmount INT,
       CustomerID INT,
       PRIMARY KEY(OrderID),
       FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
 );

 INSERT INTO Order
 VALUES (301, TO_DATE('2024-03-24', 'YYYY-MM-DD'), 2000, 5001);

 INSERT INTO Order
  VALUES (312, TO_DATE('2024-03-25', 'YYYY-MM-DD'), 60, 5002);

 INSERT INTO Order
  VALUES (324, TO_DATE('2024-03-26', 'YYYY-MM-DD'), 45, 5003);

 INSERT INTO Order
 VALUES (335, TO_DATE('2024-03-27', 'YYYY-MM-DD'), 100, 5004);


 INSERT INTO Order
 VALUES (346, TO_DATE('2024-03-28', 'YYYY-MM-DD'), 30, 5005);

 INSERT INTO Order
 VALUES (357, TO_DATE('2024-03-29', 'YYYY-MM-DD'), 1000, 5006);

 INSERT INTO Order
 VALUES (368, TO_DATE('2024-03-30', 'YYYY-MM-DD'), 40, 5007);

 INSERT INTO Order
 VALUES (379, TO_DATE('2024-03-31', 'YYYY-MM-DD'), 45, 5008);

 INSERT INTO Order
 VALUES (380,TO_DATE('2024-04-01', 'YYYY-MM-DD'), 50, 5009);
```

```
INSERT INTO Order
VALUES (391, TO_DATE('2024-04-02', 'YYYY-MM-DD'), 60, 5010);
```

Order table:-

ORDERID	ORDERDATE	ORDERAMOUNT	CUSTOMERID
301	2024-03-24	2000	5001
312	2024-03-25	60	5002
324	2024-03-26	45	5003
335	2024-03-27	100	5004
346	2024-03-28	30	5005
357	2024-03-29	1000	5006
368	2024-03-30	40	5007
379	2024-03-31	45	5008
380	2024-04-01	50	5009
391	2024-04-02	60	5010

```sql
CREATE TABLE Category
(
    CategoryID INT,
    CategoryName VARCHAR(100),
    Description VARCHAR(255) ,
    PRIMARY KEY(CategoryID)
);



INSERT INTO Category
VALUES (1, 'Electronics', 'Devices and accessories related to electronics.');

INSERT INTO Category
VALUES (2, 'Clothing', 'Apparel and fashion accessories.');

INSERT INTO Category
VALUES (3, 'Books', 'Books and literary works.');

INSERT INTO Category
VALUES (4, 'Home & Kitchen', 'Household items and kitchen appliances.');

INSERT INTO Category
VALUES (5, 'Sports & Outdoors', 'Sports equipment and outdoor gear.');

INSERT INTO Category
VALUES (6, 'Beauty & Personal Care', 'Beauty products and personal
grooming items.');

INSERT INTO Category
VALUES (7, 'Toys & Games', 'Toys, games, and hobby-related items.');

INSERT INTO Category
VALUES (8, 'Furniture', 'Furniture and home decor accessories.');
```

```
INSERT INTO Category
VALUES (9, 'Automotive', 'Automotive parts and accessories.');

INSERT INTO Category
VALUES (10, 'Health & Wellness', 'Healthcare products and wellness supplements.');
```

Category table:-

CATEGORYID	CATEGORYNAME	DESCRIPTION
1	Electronics	Devices and accessories related to electronics.
2	Clothing	Apparel and fashion accessories.
3	Books	Books and literary works.
4	Home & Kitchen	Household items and kitchen appliances.
5	Sports & Outdoors	Sports equipment and outdoor gear.
6	Beauty & Personal Care	Beauty products and personal grooming items.
7	Toys & Games	Toys, games, and hobby-related items.
8	Furniture	Furniture and home decor accessories.
9	Automotive	Automotive parts and accessories.
10	Health & Wellness	Healthcare products and wellness supplements.

```
CREATE TABLE Product
(
	ProductID INT,
	ProductName VARCHAR(100),
	stock INT,
	brand VARCHAR(100),
	ProductDescription VARCHAR(255),
	MRP INT,
	 CategoryID INT,
	PRIMARY KEY(ProductID),
	FOREIGN KEY(CategoryID)    REFERENCES Category(CategoryID)
);


INSERT INTO Product
VALUES (987651, 'Smartphone', 100, 'Samsung', 'High-performance
smartphone', 800, 1);

INSERT INTO Product
VALUES (543222, 'Denim Jeans', 200, 'Levi''s', 'Men''s denim jeans', 50, 2);

INSERT INTO Product
VALUES (123463, 'Fiction Novel', 150, 'Penguin Books', 'Bestseller fiction
novel', 10, 3);

INSERT INTO Product
VALUES (678614, 'Coffee Maker', 50, 'Keurig', 'Home coffee brewing
machine', 100, 4);

INSERT INTO Product
VALUES (336575, 'Tennis Racket', 30, 'Wilson', 'Professional tennis racket',
150, 5);
```

```
INSERT INTO Product
VALUES (873556, 'Shampoo', 120, 'Pantene', 'Hair care shampoo', 15, 6);

INSERT INTO Product
 VALUES (341687, 'Board Game', 80, 'Hasbro', 'Classic board game set', 30,
7);

INSERT INTO Product
VALUES (879681, 'Sofa', 40, 'IKEA', 'Living room sofa', 500, 8);

INSERT INTO Product
VALUES (243244, 'Car Battery', 60, 'Optima', 'Automobile battery', 200, 9);

INSERT INTO Product
 VALUES (423471, 'Vitamin Supplements', 90, 'Nature Made',  'Health
supplements', 20, 10);
```

PRODUCT TABLE:-

PRODUCTID	PRODUCTNAME	STOCK	BRANCD	PRODUCTDESCRIPTION	MRP	CATEGORYID
67860	Coffee Maker	50	Keurig	Home coffee brewing machine	100	4
23656	Tennis Racket	30	Wilson	Professional tennis racket	150	5
87354	Shampoo	120	Pantene	Hair care shampoo	15	6
34167	Board Game	80	Hasbro	Classic board game set	30	7
54322	Denim Jeans	200	Levi's	Men's denim jeans	50	2
12346	Fiction Novel	150	Penguin Books	Bestseller fiction novel	10	3
67861	Coffee Maker	50	Keurig	Home coffee brewing machine	100	4
23657	Tennis Racket	30	Wilson	Professional tennis racket	150	5
87355	Shampoo	120	Pantene	Hair care shampoo	15	6
34168	Board Game	80	Hasbro	Classic board game set	30	7
98796	Sofa	40	IKEA	Living room sofa	500	8
54324	Car Battery	60	Optima	Automobile battery	200	9
12347	Vitamin Supplements	90	Nature Made	Health supplements	20	10

```
CREATE TABLE OrderItems
(
    OrderID INT,
    ProductID INT,
    Quantity INT,
    Item_MRP INT,
    PRIMARY KEY (OrderID,ProductID),
    FOREIGN KEY (OrderID) REFERENCES  Order(OrderID),
    FOREIGN KEY (ProductID) REFERENCES  Product(ProductID)
);


INSERT INTO OrderItems VALUES (301,  987651, 2, 800);

INSERT INTO OrderItems VALUES (312,  543222, 3, 50);

INSERT INTO OrderItems VALUES (324,123463, 1, 10);

INSERT INTO OrderItems VALUES (335,678614, 2, 100);

INSERT INTO OrderItems VALUES (346, 336575, 1, 150);

INSERT INTO OrderItems VALUES (357, 873556, 1, 15);

INSERT INTO OrderItems VALUES (368,341687, 2, 30);

INSERT INTO OrderItems VALUES (379, 879681, 1, 500);


INSERT INTO OrderItems VALUES (380,243244, 2, 200);

INSERT INTO OrderItems VALUES (391,423471, 3, 20);
```

OrderItems table:-

ORDERID	PRODUCTID	QUANTITY	ITEM_MRP
368	341687	2	30
301	987651	2	800
312	543222	3	50
324	123463	1	10
335	678614	2	100
346	336575	1	150
357	873556	1	15
379	879681	1	500
380	243244	2	200
391	423471	3	20

```
CREATE TABLE TakesFrom
(
	WarehouseNO INT,
	OrderID INT,
	PRIMARY KEY(WarehouseNO,OrderID),
	FOREIGN KEY (WarehouseNO) REFERENCES
WareHouse(WarehouseNO),
	FOREIGN KEY(OrderID) REFERENCES  Order(OrderID)
);

INSERT INTO TakesFrom VALUES (11, 301);

INSERT INTO TakesFrom VALUES (12, 312);

INSERT INTO TakesFrom VALUES (13, 324);

INSERT INTO TakesFrom VALUES (14, 335);

INSERT INTO TakesFrom VALUES (15, 346);

INSERT INTO TakesFrom VALUES (16, 357);

INSERT INTO TakesFrom VALUES (17, 368);

INSERT INTO TakesFrom VALUES (18, 379);

INSERT INTO TakesFrom VALUES (19, 380);


INSERT INTO TakesFrom VALUES (20, 391);
```

TakesFrom table:-

WAREHOUSENO	ORDERID
11	301
12	312
13	324
14	335
15	346
16	357
17	368
18	379
19	380
20	391

```
CREATE TABLE TrackingDetails
(
    TrackingID INT,
    ExpectedShippingDate DATE,
    OrderStatus VARCHAR(100),
    OrderID INT,
    PRIMARY KEY   (TrackingID),
    FOREIGN KEY(OrderID) REFERENCES  Order(OrderID)
);
```

```
INSERT INTO TrackingDetails
VALUES (10011,TO_DATE( '2024-03-24', 'YYYY-MM-DD'), 'Processing', 301);

INSERT INTO TrackingDetails
VALUES (10012,TO_DATE( '2024-03-25', 'YYYY-MM-DD'), 'Shipped', 312);

INSERT INTO TrackingDetails
VALUES (10013, TO_DATE('2024-03-26', 'YYYY-MM-DD'), 'Delivered', 324);

INSERT INTO TrackingDetails
VALUES (10014, TO_DATE('2024-03-27', 'YYYY-MM-DD'), 'Processing', 335);

INSERT INTO TrackingDetails
VALUES (10015, TO_DATE('2024-03-28', 'YYYY-MM-DD'), 'Shipped', 346);

INSERT INTO TrackingDetails
 VALUES (10016,TO_DATE( '2024-03-29', 'YYYY-MM-DD'), 'Delivered', 357);

INSERT INTO TrackingDetails
VALUES (10017, TO_DATE('2024-03-30', 'YYYY-MM-DD'), 'Processing', 368);

INSERT INTO TrackingDetails
VALUES (10018, TO_DATE('2024-03-31', 'YYYY-MM-DD'), 'Shipped', 379);

INSERT INTO TrackingDetails
VALUES (10019,  TO_DATE('2024-04-01', 'YYYY-MM-DD'), 'Delivered', 380);

INSERT INTO TrackingDetails
VALUES (10020, TO_DATE('2024-04-02', 'YYYY-MM-DD'), 'Processing', 391);
```

TrackingDetails table:-

TRACKINGID	EXPECTEDSHIPPINGDATE	ORDERSTATUS	ORDERID
10011	2024-03-24	Processing	301
10012	2024-03-25	Shipped	312
10013	2024-03-26	Delivered	324
10014	2024-03-27	Processing	335
10015	2024-03-28	Shipped	346
10016	2024-03-29	Delivered	357
10017	2024-03-30	Processing	368
10018	2024-03-31	Shipped	379
10019	2024-04-01	Delivered	380
10020	2024-04-02	Processing	391

```
CREATE TABLE Seller
(
    SellerID INT,
    BusinessName VARCHAR(100),
    PhoneNO INT,
    Location VARCHAR(100),
    PRIMARY KEY (SellerID)
);
```

```
INSERT INTO Seller
VALUES (101, 'Electronics Hub', 8234567890, 'Main Street');

INSERT INTO Seller
 VALUES (202, 'Fashion Emporium', 6345678901, 'High Street');

INSERT INTO Seller
VALUES (303, 'Bookstore Inc.', 8456789012, 'Market Square');

INSERT INTO Seller
VALUES (404, 'Home Essentials', 7567890123, 'Park Avenue');

INSERT INTO Seller
 VALUES (505, 'Sports Zone', 6678901234, 'Broadway');

INSERT INTO Seller
VALUES (606, 'Beauty Boutique', 6789012345, 'Sunset Boulevard');

INSERT INTO Seller
VALUES (707, 'Toy Palace', 7890123456, 'Central Plaza');

INSERT INTO Seller
VALUES (808, 'Furniture Galore', 8901234567, 'Oak Street');

INSERT INTO Seller
VALUES (909, 'Auto Parts Plus', 9012345678, 'Main Road');

INSERT INTO Seller
VALUES (1010, 'Health Haven', 9876543210, 'Elm Street');
```

Seller table:-

SELLERID	BUSINESSNAME	PHONENO	LOCATION
101	Electronics Hub	8234567890	Main Street
202	Fashion Emporium	6345678901	High Street
303	Bookstore Inc.	8456789012	Market Square
404	Home Essentials	7567890123	Park Avenue
505	Sports Zone	6678901234	Broadway
606	Beauty Boutique	6789012345	Sunset Boulevard
707	Toy Palace	7890123456	Central Plaza
808	Furniture Galore	8901234567	Oak Street
909	Auto Parts Plus	9012345678	Main Road
1010	Health Haven	9876543210	Elm Street

```
CREATE TABLE Supplied_to
(
    SellerID INT,
    WarehouseNO INT,
    PRIMARY KEY(SellerID, WarehouseNO),
    FOREIGN KEY (SellerID) REFERENCES Seller(SellerID),
    FOREIGN KEY (WarehouseNO) REFERENCES
WareHouse(WarehouseNO)
);
```

```
INSERT INTO Supplied_to VALUES (101, 11);

INSERT INTO Supplied_to VALUES (202, 12);

INSERT INTO Supplied_to VALUES (303, 13);

INSERT INTO Supplied_to VALUES (404, 14);

INSERT INTO Supplied_to VALUES (505, 15);

INSERT INTO Supplied_to VALUES (606, 16);

INSERT INTO Supplied_to VALUES (707, 17);

INSERT INTO Supplied_to VALUES (808, 18);

INSERT INTO Supplied_to VALUES (909, 19);

INSERT INTO Supplied_to VALUES (1010, 20);
```

Supplied_to table:-

SELLERID	WAREHOUSENO
101	11
202	12
303	13
404	14
505	15
606	16
707	17
808	18
909	19
1010	20

```
CREATE TABLE Warehouse
(
    WarehouseNO INT,
    Location VARCHAR(100),
    PRIMARY KEY(WarehouseNO)
);
```

```
INSERT INTO Warehouse VALUES (11, 'Downtown');

INSERT INTO Warehouse VALUES (12, 'Industrial Park');

INSERT INTO Warehouse VALUES (13, 'Waterfront');

INSERT INTO Warehouse VALUES (14, 'Suburbs');

INSERT INTO Warehouse VALUES (15, 'Business District');

INSERT INTO Warehouse VALUES (16, 'Airport Zone');

INSERT INTO Warehouse VALUES (17, 'Tech Hub');

INSERT INTO Warehouse VALUES (18, 'Harbor');

INSERT INTO Warehouse VALUES (19, 'Commercial Center');

INSERT INTO Warehouse VALUES (20, 'Shopping Mall');
```

Warehouse table:-

WAREHOUSENO	LOCATION
11	Downtown
12	Industrial Park
13	Waterfront
14	Suburbs
15	Business District
16	Airport Zone
17	Tech Hub
18	Harbor
19	Commercial Center
20	Shopping Mall

****