

DB Model Design for Online Shopping Platform

Creating Tables for the entities:

Customers:

```
mysql> CREATE TABLE Customers (  
->     customer_id INT PRIMARY KEY,  
->     customer_name VARCHAR(50) NOT NULL,  
->     customer_email VARCHAR(50) NOT NULL,  
->     customer_phone VARCHAR(15),  
->     customer_address VARCHAR(100),  
->     customer_city VARCHAR(50),  
->     customer_state VARCHAR(50),  
->     customer_country VARCHAR(50),  
->     customer_pincode VARCHAR(10)  
-> );  
Query OK, 0 rows affected (0.01 sec)
```

Products:

```
mysql> CREATE TABLE Product (  
->     product_id INT PRIMARY KEY,  
->     product_name VARCHAR(50) NOT NULL,  
->     product_price DECIMAL(10, 2) NOT NULL,  
->     product_description TEXT,  
->     product_category VARCHAR(50)  
-> );  
Query OK, 0 rows affected (0.00 sec)
```

Orders:

```
mysql> CREATE TABLE Orders (  
->     order_id INT PRIMARY KEY,  
->     order_date DATE NOT NULL,  
->     order_status VARCHAR(20),  
->     customer_id INT,  
->     payment_id INT,  
->     shipment_id INT,  
->     product_id INT,  
->     quantity INT NOT NULL,  
->     total_amount DECIMAL(10, 2) NOT NULL,  
->     FOREIGN KEY (customer_id) REFERENCES Customers(customer_id),  
->     FOREIGN KEY (payment_id) REFERENCES Payment(payment_id),  
->     FOREIGN KEY (shipment_id) REFERENCES Shipments(shipment_id),  
->     FOREIGN KEY (product_id) REFERENCES Product(product_id)  
-> );  
Query OK, 0 rows affected (0.02 sec)
```

Payment:

```
mysql> CREATE TABLE Payment (  
->     payment_id INT PRIMARY KEY,  
->     payment_date DATE NOT NULL,  
->     payment_method VARCHAR(20),  
->     payment_status VARCHAR(20),  
->     amount DECIMAL(10, 2) NOT NULL  
-> );  
Query OK, 0 rows affected (0.01 sec)
```

Shipments:

```
mysql> CREATE TABLE Shipments (  
->     shipment_id INT PRIMARY KEY,  
->     shipment_date DATE NOT NULL,  
->     shipment_status VARCHAR(20),  
->     shipment_address VARCHAR(100),  
->     shipment_city VARCHAR(50),  
->     shipment_state VARCHAR(50),  
->     shipment_country VARCHAR(50),  
->     shipment_pincode VARCHAR(10),  
->     tracking_id VARCHAR(20)  
-> );  
Query OK, 0 rows affected (0.01 sec)
```

Offers:

```
mysql> CREATE TABLE Offers (  
->     offer_id INT PRIMARY KEY,  
->     offer_name VARCHAR(50) NOT NULL,  
->     offer_description TEXT,  
->     offer_discount DECIMAL(10, 2) NOT NULL,  
->     product_id INT,  
->     FOREIGN KEY (product_id) REFERENCES Product(product_id)  
-> );  
Query OK, 0 rows affected (0.01 sec)
```

Reviews:

```
mysql> CREATE TABLE Reviews (  
->     review_id INT PRIMARY KEY,  
->     review_date DATE NOT NULL,  
->     review_rating INT CHECK (review_rating BETWEEN 1 AND 5),  
->     review_comment TEXT,  
->     product_id INT,  
->     FOREIGN KEY (product_id) REFERENCES Product(product_id)  
-> );  
Query OK, 0 rows affected (0.01 sec)
```

Inserting Data into each table:

Customers:

```
mysql> INSERT INTO Customers (customer_id, customer_name, customer_email, customer_phone, customer_address, customer_city, customer_state, customer_country, customer_pincode)
-> VALUES
-> (1, 'John Doe', 'john.doe@example.com', '1234567890', '123 Elm Street', 'Springfield', 'IL', 'USA', '62701'),
-> (2, 'Jane Smith', 'jane.smith@example.com', '0987654321', '456 Oak Avenue', 'Shelbyville', 'IN', 'USA', '46176'),
-> (3, 'Alice Johnson', 'alice.johnson@example.com', '1112223333', '789 Pine Lane', 'Capital City', 'TX', 'USA', '73301'),
-> (4, 'Bob Brown', 'bob.brown@example.com', '4445556666', '101 Maple Road', 'Ogdenville', 'CA', 'USA', '90210'),
-> (5, 'Carol White', 'carol.white@example.com', '7778889999', '202 Birch Street', 'North Haverbrook', 'NY', 'USA', '10001');
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Products:

```
mysql> INSERT INTO Product (product_id, product_name, product_price, product_description, product_category)
-> VALUES
-> (1, 'Laptop', 999.99, 'High-performance laptop with 16GB RAM and 512GB SSD.', 'Electronics'),
-> (2, 'Smartphone', 499.99, 'Latest model smartphone with 5G capability.', 'Electronics'),
-> (3, 'Desk Chair', 149.99, 'Ergonomic office chair with lumbar support.', 'Furniture'),
-> (4, 'Coffee Maker', 79.99, '12-cup programmable coffee maker.', 'Home Appliances'),
-> (5, 'Electric Kettle', 29.99, '1.7L electric kettle with auto shut-off.', 'Home Appliances');
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Orders:

```
mysql> INSERT INTO Orders (order_id, order_date, order_status, customer_id, payment_id, shipment_id, product_id, quantity, total_amount)
-> VALUES
-> (1, '2024-05-01', 'Shipped', 1, 1, 1, 1, 1, 999.99),
-> (2, '2024-05-02', 'Processing', 2, 2, 2, 2, 2, 999.98),
-> (3, '2024-05-03', 'Delivered', 3, 3, 3, 3, 1, 149.99),
-> (4, '2024-05-04', 'Cancelled', 4, 4, 4, 4, 1, 79.99),
-> (5, '2024-05-05', 'Pending', 5, 5, 5, 5, 2, 59.98);
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Payment:

```
mysql> INSERT INTO Payment (payment_id, payment_date, payment_method, payment_status, amount)
-> VALUES
-> (1, '2024-05-01', 'Credit Card', 'Completed', 999.99),
-> (2, '2024-05-02', 'PayPal', 'Completed', 499.99),
-> (3, '2024-05-03', 'Debit Card', 'Pending', 149.99),
-> (4, '2024-05-04', 'Bank Transfer', 'Cancelled', 79.99),
-> (5, '2024-05-05', 'Credit Card', 'Pending', 59.98);
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Shipment:

```
mysql> INSERT INTO Shipments (shipment_id, shipment_date, shipment_status, shipment_address, shipment_city, shipment_state, shipment_country, shipment_pincode, tracking_id)
-> VALUES
-> (1, '2024-05-01', 'Shipped', '123 Elm Street', 'Springfield', 'IL', 'USA', '62701', 'TRACK123'),
-> (2, '2024-05-02', 'In Transit', '456 Oak Avenue', 'Shelbyville', 'IN', 'USA', '46176', 'TRACK456'),
-> (3, '2024-05-03', 'Delivered', '789 Pine Lane', 'Capital City', 'TX', 'USA', '73301', 'TRACK789'),
-> (4, '2024-05-04', 'Returned', '101 Maple Road', 'Ogdenville', 'CA', 'USA', '90210', 'TRACK101'),
-> (5, '2024-05-05', 'Processing', '202 Birch Street', 'North Haverbrook', 'NY', 'USA', '10001', 'TRACK202');
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Offers:

```
mysql> INSERT INTO Offers (offer_id, offer_name, offer_description, offer_discount, product_id)
-> VALUES
-> (1, 'Summer Sale', 'Get 10% off on all electronics.', 10.00, 1),
-> (2, 'Winter Clearance', 'Up to 50% off on select items.', 50.00, 2),
-> (3, 'Buy One Get One', 'Buy one get one free on all home appliances.', 50.00, 3),
-> (4, 'Holiday Special', '20% off on furniture.', 20.00, 4),
-> (5, 'Flash Sale', 'Limited time offer on selected products.', 15.00, 5);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Reviews:

```
mysql> INSERT INTO Reviews (review_id, review_date, review_rating, review_comment, product_id)
-> VALUES
-> (1, '2024-05-01', 5, 'Excellent laptop, highly recommend!', 1),
-> (2, '2024-05-02', 4, 'Great phone but battery life could be better.', 2),
-> (3, '2024-05-03', 3, 'Chair is comfortable but the assembly was difficult.', 3),
-> (4, '2024-05-04', 2, 'Coffee maker stopped working after a week.', 4),
-> (5, '2024-05-05', 5, 'Very useful and fast heating kettle.', 5);
Query OK, 5 rows affected (0.00 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

Displaying the data in each table:

Customers:

```
mysql> SELECT * FROM Customers;
```

customer_id	customer_name	customer_email	customer_phone	customer_address	customer_city	customer_state	customer_country	customer_pincode
1	John Doe	john.doe@example.com	1234567890	123 Elm Street	Springfield	IL	USA	62701
2	Jane Smith	jane.smith@example.com	0987654321	456 Oak Avenue	Shelbyville	IN	USA	46176
3	Alice Johnson	alice.johnson@example.com	1112223333	789 Pine Lane	Capital City	TX	USA	73301
4	Bob Brown	bob.brown@example.com	4445556666	101 Maple Road	Ogdenville	CA	USA	90210
5	Carol White	carol.white@example.com	7778889999	202 Birch Street	North Haverbrook	NY	USA	10001

5 rows in set (0.00 sec)

Products:

```
mysql> SELECT * FROM Product;
```

product_id	product_name	product_price	product_description	product_category
1	Laptop	999.99	High-performance laptop with 16GB RAM and 512GB SSD.	Electronics
2	Smartphone	499.99	Latest model smartphone with 5G capability.	Electronics
3	Desk Chair	149.99	Ergonomic office chair with lumbar support.	Furniture
4	Coffee Maker	79.99	12-cup programmable coffee maker.	Home Appliances
5	Electric Kettle	29.99	1.7L electric kettle with auto shut-off.	Home Appliances

5 rows in set (0.00 sec)

```
mysql> SELECT * FROM Orders;
```

Orders:

```
mysql> SELECT * FROM Orders;
```

order_id	order_date	order_status	customer_id	payment_id	shipment_id	product_id	quantity	total_amount
1	2024-05-01	Shipped	1	1	1	1	1	999.99
2	2024-05-02	Processing	2	2	2	2	2	999.98
3	2024-05-03	Delivered	3	3	3	3	1	149.99
4	2024-05-04	Cancelled	4	4	4	4	1	79.99
5	2024-05-05	Pending	5	5	5	5	2	59.98

5 rows in set (0.00 sec)

Payment:

```
mysql> SELECT * FROM Payment;
```

payment_id	payment_date	payment_method	payment_status	amount
1	2024-05-01	Credit Card	Completed	999.99
2	2024-05-02	PayPal	Completed	499.99
3	2024-05-03	Debit Card	Pending	149.99
4	2024-05-04	Bank Transfer	Cancelled	79.99
5	2024-05-05	Credit Card	Pending	59.98

5 rows in set (0.00 sec)

Shipment:

```
mysql> SELECT * FROM Shipments;
```

shipment_id	shipment_date	shipment_status	shipment_address	shipment_city	shipment_state	shipment_country	shipment_pincode	tracking_id
1	2024-05-01	Shipped	123 Elm Street	Springfield	IL	USA	62701	TRACK123
2	2024-05-02	In Transit	456 Oak Avenue	Shelbyville	IN	USA	46176	TRACK456
3	2024-05-03	Delivered	789 Pine Lane	Capital City	TX	USA	73301	TRACK789
4	2024-05-04	Returned	101 Maple Road	Ogdenville	CA	USA	90210	TRACK101
5	2024-05-05	Processing	202 Birch Street	North Haverbrook	NY	USA	10001	TRACK202

5 rows in set (0.00 sec)

Offers:

```
mysql> SELECT * FROM Offers;
```

offer_id	offer_name	offer_description	offer_discount	product_id
1	Summer Sale	Get 10% off on all electronics.	10.00	1
2	Winter Clearance	Up to 50% off on select items.	50.00	2
3	Buy One Get One	Buy one get one free on all home appliances.	50.00	3
4	Holiday Special	20% off on furniture.	20.00	4
5	Flash Sale	Limited time offer on selected products.	15.00	5

5 rows in set (0.00 sec)

Reviews:

```
[mysql> SELECT * FROM Reviews;
```

review_id	review_date	review_rating	review_comment	product_id
1	2024-05-01	5	Excellent laptop, highly recommend!	1
2	2024-05-02	4	Great phone but battery life could be better.	2
3	2024-05-03	3	Chair is comfortable but the assembly was difficult.	3
4	2024-05-04	2	Coffee maker stopped working after a week.	4
5	2024-05-05	5	Very useful and fast heating kettle.	5

```
5 rows in set (0.00 sec)
```