

Ex: 12.

Date: 23/10/25

## Task 12: Micro projects:

Aim:

To do a micro project on online shopping cart managing.

→ To design & Implement a relational d/b for online shopping platform.

→ To maintain records for users, products, orders, & payments efficiently.

→ To ensure data consistency & integrity through normalization.

→ To demonstrate CRUD operations using SQL.

→ To generate useful reports like sales & inventory summary E-R diagram (model):

Entities : Relationship

Customer → 1 customer can have many orders.

Product → 1 order can have many products.

Cart → 1 order gives 1 payment record

Order → 1 order gives 1 payment record

Payment → 1 customer can have many products

## Database design

Customer table:

```
CREATE TABLE Customer (CU-ID int PRIMARY KEY,  
CUName varchar(20), email varchar(20) unique,  
Phone varchar(10));
```

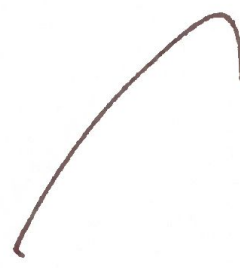
Product table:

```
CREATE TABLE Product (Pr-id int PRIMARY KEY,  
Pname varchar(10), price int, stock int);
```

Pt-ID	Dr-name	Price	Stock
221	Watch	250	115
102	Shoes	500	150
201	Laptop	25008	80

Revenue

59000.00



Cart table:

```
CREATE TABLE cart (C-ID INT PRIMARY KEY, CU-ID INT, FOREIGN KEY (CU-ID) REFERENCES customer (CU-ID), item VARCHAR (15) PRIMARY KEY, FOREIGN KEY (Pr-ID) REFERENCES product (Pr-ID));
```

orders:

```
CREATE TABLE orders (O-ID INT PRIMARY KEY, CU-ID INT, Amount int, Amount int, FOREIGN KEY (CU-ID) REFERENCES customer (CU-ID));
```

Payment table:

```
CREATE TABLE payment (P-ID INT PRIMARY KEY, O-ID INT, amount int, @-date date, FOREIGN KEY (O-ID) REFERENCES orders (O-ID));
```

Insertion:

```
SQL> INSERT INTO customer values ('1', 'Priya', 'priya@gmail.com')  
9876543210;
```

```
SQL> INSERT INTO product values (221, 'watch', 250, 115);
```

```
SQL> INSERT INTO product values (101, 'Shoes', 500, 100);
```

```
SQL> INSERT INTO product values (201, 'Laptop', 15000, 80);
```

SQL queries:

```
SQL> SELECT * FROM product;
```

```
SQL> SELECT SUM (amount) AS Revenue FROM orders;
```

```
SQL> SELECT product-name, stock FROM product
```

```
WHERE stock < 5;
```

VEL TECH	
EX NO	
PERFORMANCE (5)	12
RESULT AND ANALYSIS (5)	2
VIVA VOCE (5)	3
RECORD (5)	4
TOTAL (20)	21
SIGN WITH DATE	12

Result

It ensures efficient data storage, retrieval & integrity using relation design and SQL queries.

Thus, the managing of online shopping cart micro project is done and verified successfully.