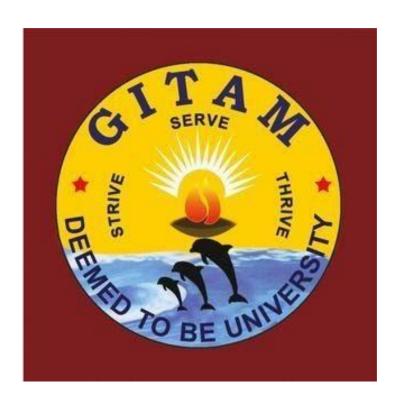
CASE STUDY

Ecommerce Management DBMS Project



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1.Project Description

In this modern era of online shopping no seller wants to be left behind, moreover due to its simplicity the shift from offline selling model to an online selling model is witnessing a rampant growth.

Therefore, as an engineer our job is to ease the path of this transition for the seller. Amongst many things that an online site requires the most important is a database system. Hence in this project we are planning to design a database where small clothing sellers can sell their product online.

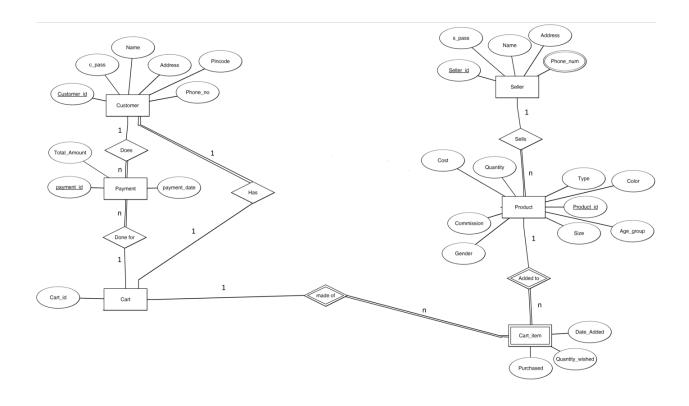
2.Basic Structure

2.1 Functional requirement

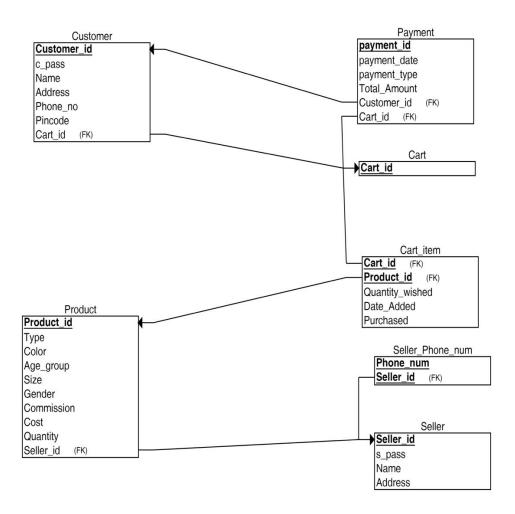
- A new user can register on the website.
- A customer can see details of the product present in the cart
- A customer can view his order history.
- Admin can start a sale with certain discount on every product.
- Customer can filter the product based on the product details.
- A customer can add or delete a product from the cart.

- A seller can unregister/ stop selling his product.
- A seller/ customer can update his details.
- Admin can view the products purchased on particular date.
- Admin can view number of products sold on a particular date.
- A customer can view the total price of product present in the cart un-purchased.
- Admin can view details of customer who have not purchased anything.
- Admin can view total profit earned from the website.

2.2 Entity Relation Diagram



2.3 Relational Database Schema



3. Implementation

3.1 Creating Tables

Cart Table:

```
CREATE TABLE Cart
   (
Cart_id VARCHAR(7) NOT NULL,
PRIMARY KEY(Cart_id)
   );
```

Customer Table:

```
CREATE TABLE Customer
Customer id VARCHAR(6) NOT NULL,
c_pass VARCHAR(10) NOT NULL,
        Name VARCHAR(20) NOT NULL,
        Address VARCHAR(20) NOT NULL,
Pincode NUMBER(6) NOT NULL,
Phone_number_s number(10) NOT NULL,
PRIMARY KEY (Customer_id),
Cart_id VARCHAR(7) NOT NULL,
FOREIGN KEY(Cart_id) REFERENCES cart(Cart_id)
    );
Seller Table:
CREATE TABLE Seller
Seller_id VARCHAR(6) NOT NULL,
s_pass VARCHAR(10) NOT NULL,
        Name VARCHAR(20) NOT NULL,
        Address VARCHAR(10) NOT NULL,
PRIMARY KEY (Seller_id)
    );
Seller Details Table:
CREATE TABLE Seller_Phone_num
Phone_num NUMBER(10) NOT NULL,
Seller id VARCHAR(6) NOT NULL,
PRIMARY KEY (Phone_num, Seller_id),
FOREIGN KEY (Seller_id) REFERENCES Seller(Seller_id)
ON DELETE CASCADE
    );
Payment Table:
CREATE TABLE Payment
payment_id VARCHAR(7) NOT NULL,
payment_date DATENOT NULL,
Payment_type VARCHAR(10) NOT NULL,
Customer_id VARCHAR(6) NOT NULL,
Cart id VARCHAR(7) NOT NULL,
PRIMARY KEY (payment id),
FOREIGN KEY (Customer id) REFERENCES Customer(Customer id),
FOREIGN KEY (Cart_id) REFERENCES Cart(Cart_id),
total amount numeric(6)
    );
Product Table:
CREATE TABLE Product
Product id VARCHAR(7) NOT NULL,
```

```
Type VARCHAR(7) NOT NULL,
Color VARCHAR(15) NOT NULL,
P_Size VARCHAR(2) NOT NULL,
        Gender CHAR(1) NOT NULL,
        Commission NUMBER(2) NOT NULL,
        Cost NUMBER(5) NOT NULL,
        Quantity NUMBER(2) NOT NULL,
Seller id VARCHAR(6),
PRIMARY KEY (Product_id),
FOREIGN KEY (Seller_id) REFERENCES Seller(Seller_id)
ON DELETESETNULL
    );
Cart item Table:
CREATE TABLE Cart_item
Quantity_wished NUMBER(1) NOT NULL,
Date_Added DATENOT NULL,
Cart_id VARCHAR(7) NOT NULL,
Product id VARCHAR(7) NOT NULL,
FOREIGN KEY (Cart_id) REFERENCES Cart(Cart_id),
FOREIGN KEY (Product_id) REFERENCES Product(Product_id),
Primary key (Cart_id, Product_id)
    );
Alter table Cart_item add purchased varchar(3) default 'NO';
3.2 Inserting Values
Cart Table:
CREATE TABLE Cart
Cart_id VARCHAR(7) NOT NULL,
PRIMARY KEY(Cart_id)
    );
insert into Cart values('crt1011');
insert into Cart values('crt1012');
insert into Cart values('crt1013');
insert into Cart values('crt1014');
insert into Cart values('crt1015');
select * from cart;
output:
  CART ID
  crt1011
  crt1012
  crt1013
```

Download CSV 5 rows selected.

crt1014

Customer Table:

```
CREATE TABLE Customer
Customer id VARCHAR(6) NOT NULL,
c_pass VARCHAR(10) NOT NULL,
        Name VARCHAR(20) NOT NULL,
        Address VARCHAR(20) NOT NULL,
Pincode NUMBER(6) NOT NULL,
Phone_number_s number(10) NOT NULL,
PRIMARY KEY (Customer_id),
Cart_id VARCHAR(7) NOT NULL,
FOREIGN KEY(Cart id) REFERENCES cart(Cart id)
    );
insert into Customer values('cid100','ABCM1235','Rajat','G-
453','632014',9893135876, 'crt1011');
insert into Customer values('cid101','DSEM1247','David','y-678','530003',
8358769893, 'crt1012');
insert into Customer values('cid102','ADEF4595','Indhu','jk-
999','789654',7135876989, 'crt1013');
insert into Customer values('cid103', 'ADER1585', 'Meghan', 'd-
453','589462',7428358769, 'crt1014');
insert into Customer values('cid104', 'HYTK6535', 'Samul', 'ab-
43','589645',8769893135, 'crt1015');
select * from customer;
```

output:

CUSTOMER_ID	C_PASS	NAME	ADDRESS	PINCODE	PHONE_NUMBER_S	CART_
cid100	ABCM1235	Rajat	G-453	632014	9893135876	crt10
cid101	DSEM1247	David	y-678	530003	8358769893	crt10
cid104	HYTK6535	Samul	ab-34	589645	8769893135	crt10
cid102	ADEF4595	Indhu	jk-999	789654	7135876989	crt10
cid103	ADER1585	Meghan	d-453	589462	7428358769	crt10

Seller Table:

```
CREATE TABLE Seller
   (
Seller_id VARCHAR(6) NOT NULL,
s_pass VARCHAR(10) NOT NULL,
        Name VARCHAR(20) NOT NULL,
        Address VARCHAR(10) NOT NULL,
PRIMARY KEY (Seller_id)
   );

insert into Seller values('sid100','12345','aman','delhi cmc');
insert into Seller values('sid101','45467','jiva','mumbai');
insert into Seller values('sid102','45123','sam','gujarat');
```

```
insert into Seller values('sid103','34512','nayan','delhi');
insert into Seller values('sid104','31245','amar','kerala');
select * from seller;
```

output:

SELLER_ID	S_PASS	NAME	ADDRESS
sid100	12345	aman	delhi cmo
sid101	45467	jiva	mumbai
sid102	45123	sam	gujarat
sid103	34512	nayan	delhi
sid104	31245	amar	kerala

Seller Details Table:

Output:



Payment Table:

```
CREATE TABLE Payment

(
payment_id VARCHAR(7) NOT NULL,
payment_date DATENOT NULL,
Payment_type VARCHAR(10) NOT NULL,
Customer_id VARCHAR(6) NOT NULL,
Cart_id VARCHAR(7) NOT NULL,
PRIMARY KEY (payment_id),
```

```
FOREIGN KEY (Customer_id) REFERENCES Customer(Customer_id),
FOREIGN KEY (Cart_id) REFERENCES Cart(Cart_id),
total_amount numeric(6)
   );

insert into Payment values('pmt1001',to_date('10-JUNE -1999','dd-mon-yyyy'),'online','cid100','crt1011',NULL);
insert into Payment values('pmt1002',to_date('09-SEPT-1999','dd-mon-yyyy'),'online','cid101','crt1012',NULL);
insert into Payment values('pmt1003',to_date('20-DEC-1999','dd-mon-yyyy'),'online','cid102','crt1012',NULL);
insert into Payment values('pmt1004',to_date('15-JAN-2000','dd-mon-yyyy'),'online','cid103','crt1013',NULL);
insert into Payment values('pmt1005',to_date('18-FEB-2000','dd-mon-yyyy'),'online','cid104','crt1014',NULL);
select * from payement;
```

OUTPUT:

PAYMENT_ID	PAYMENT_DATE	PAYMENT_TYPE	CUSTOMER_ID	CART_ID	TOTAL_AMOUNT
pmt1001	10-JUN-99	online	cid100	crt1011	-
pmt1003	20-DEC-99	online	cid102	crt1012	-
pmt1004	15-JAN-00	online	cid103	crt1013	-
pmt1005	18-FEB-00	online	cid104	crt1014	-

Product Table:

```
CREATE TABLE Product
Product id VARCHAR(7) NOT NULL,
Type VARCHAR(7) NOT NULL,
Color VARCHAR(15) NOT NULL,
P Size VARCHAR(2) NOT NULL,
        Gender CHAR(1) NOT NULL,
        Commission NUMBER(2) NOT NULL,
        Cost NUMBER(5) NOT NULL,
        Quantity NUMBER(2) NOT NULL,
Seller_id VARCHAR(6),
PRIMARY KEY (Product_id),
FOREIGN KEY (Seller_id) REFERENCES Seller(Seller_id)
ON DELETESETNULL
    );
insert into Product values('pid1001', 'jeans', 'red', '32', 'M', 10, 10005, 20, 'sid100');
insert into Product
values('pid1002','skirt','multi','32','S',9,10705,30,'sid101');
```

```
insert into Product
values('pid1003','frock','black','32','M',61,15645,18,'sid102');
insert
intoProductvalues('pid1004','lehanga','marron','32','L',50,70608,45,'sid103');
insert into Product
values('pid1005','shirt','pink','32','M',18,14565,25,'sid104');
select * from Product;
```

OUTPUT:

PRODUCT_ID	TYPE	COLOR	P_SIZE	GENDER	COMMISSION	COST	QUANTITY	SELLER_I
pid1001	jeans	red	32	М	10	10005	20	sid100
pid1002	skirt	multi	28	S	9	10705	30	sid101
pid1003	frock	black	32	М	61	15645	18	sid102
pid1004	lehanga	marron	36	L	50	70608	45	sid103
pid1005	shirt	pink	34	М	18	14565	25	sid104

Cart item Table:

```
CREATE TABLE Cart_item
Quantity_wished NUMBER(1) NOT NULL,
Date Added DATENOT NULL,
Cart_id VARCHAR(7) NOT NULL,
Product_id VARCHAR(7) NOT NULL,
FOREIGN KEY (Cart_id) REFERENCES Cart(Cart_id),
FOREIGN KEY (Product id) REFERENCES Product(Product id),
Primary key(Cart id, Product id)
    );
Alter table Cart_item add purchased varchar(3) default 'NO';
insert into Cart_item values(3,to_date('10-JUNE-1999','dd-mon-
yyyy'),'crt1011','pid1001','Y');
insert into Cart_item values(2,to_date('09-SEPT-1999','dd-mon-
yyyy'),'crt1012','pid1002','Y');
insert into Cart_item values(1,to_date('20-DEC-1999','dd-mon-yyyy'),'crt1013','pid1003','Y');
insert into Cart_item values(3,to_date('15-JAN-2000','dd-mon-yyyy'),'crt1014','pid1004','Y');
insert into Cart item values(2,to date('18-FEB-2000','dd-mon-yyyy'),'crt1015','pid1005','Y');
select * from Cart_item;
```

OUTPUT:

QUANTITY_WISHED	DATE_ADDED	CART_ID	PRODUCT_ID	PURCHASED
3	10-JUN-99	crt1011	pid1001	Υ
1	20-DEC-99	crt1013	pid1003	Υ
2	18-FEB-00	crt1015	pid1005	Υ

Download CSV

3 rows selected.

DELETE AND UPDATE

```
CREATE TABLE Seller
(
Seller_idVARCHAR(6) NOT NULL,
s_passVARCHAR(10) NOT NULL,
Name VARCHAR(20) NOT NULL,
Address VARCHAR(10) NOT NULL,
PRIMARY KEY (Seller_id)
);
```

insert into Seller values('sid100','12345','aman','delhi cmc'); insert into Seller values('sid101','45467','jiva','mumbai'); insert into Seller values('sid102','45123','sam','gujarat'); insert into Seller values('sid103','34512','nayan','delhi'); insert into Seller values('sid104','31245','amar','kerala'); delete from seller where seller_id = 'sid100'; update product set quantity = 00 where seller_id is NULL; select * from seller;

OUTPUT:

SELLER_ID	S_PASS	NAME	ADDRESS
sid101	45467	jiva	mumbai
sid102	45123	sam	gujarat
sid103	34512	nayan	delhi
sid104	31245	amar	kerala

Download CSV

QUERIES

1.If the customer wants to see details of product present in the cart

2.If a customer wants to see order history

```
Select product_id,Quantity_wishedfromCart_itemwhere (purchased='Y'andCart_idin
(select Cart_idfrom customer whereCustomer_id='cid101'));
```

3. Customer wants to see filtered products on the basis of size ,gender ,type

```
Select product_id, color, cost, seller_idfrom product where
(type='jeans'andp_size='32'and gender='F'and quantity>0)
```

4. If customer wants to modify the cart

```
Delete from cart_itemwhere (product_id='pid1001'andCart_idin (selectcart_idfrom
Customer whereCustomer_id='cid100'));
```

5. If a seller stops selling his product

```
Delete from seller where seller_id='sid100';
update product set quantity =00 where seller_id is NULL;
```

6. If admin want to see what are the product purchased on the particular date

```
Select product_id from cart_item where (purchased='Y'anddate_added='12-dec-2018');
```

7. How much product sold on the particular date

```
Select count(product_id) count_pid,date_addedfromCart_itemwhere purchased='Y'group
by(date_added);
```

8. If a customer want to know the total price present in the cart

```
Select sum(quantity_wished* cost) total_payable from product p join cart_item c
onp.product_id=c.product_id wherec.product_idin
(selectproduct_idfromcart_itemwherecart_idin(selectCart_idfrom customer
wherecustomer_id='cid101') and purchased='Y');
```

9. Show the details of the customer who has not purchased any thing

```
Select*from customer wherecustomer_id not in (selectcustomer_idfrom Payment);
```

10. Find total profit of the website from sales.

```
selectsum(quantity_wished* cost * commission/100) total_profitfrom product p
joincart_item c onp.product_id=c.product_idwhere purchased='Y';
```

Normalization

PRODUCT_ID	TYPPE	COLOR	P_SIZE	GENDER	COSST	QUNATITY	SELLER_ID
Pid1001	Jeans, t- shirt	Blue, red	32,34	M	10005	20	Sid100
Pid1002	Skirt, Tank-top	Multi, White	30,32	F	10705	30	Sid101
Pid1003	Frock, Stocking	Pink, Black	34,36	F	15645	18	Sid102
Pid1004	Lehanga	Maroon	34	F	70608	45	Sid103
Pid1005	Shirt, Tie	Pink, Maroon	36,M	M	14565	25	Sid104

From the above table, we can see that it consists of atomicity and we can normalize the table to 1NF.

PRODUCT_ID	TYPPE	COLOR	P_SIZE	GENDER	COSST	QUNATITY	SELLER_ID
Pid1001	jeans	Blue	32	M	10005	20	Sid100
Pid1001	t-shirt	red	34	M	10005	20	Sid100
Pid1002	Skirt	Multi	30	F	10705	30	Sid101
Pid1002	Tank-top	White	32	F	10705	30	Sid101
Pid1003	Frock	Pink	34	F	15645	18	Sid102
Pid1003	Stocking	Black	36	F	15645	18	Sid102
Pid1004	Lehanga	Maroon	34	F	70608	45	Sid103
Pid1005	Shirt	Pink	36	M	14565	25	Sid104
Pid1005	Tie	Maroon	M	M	14565	25	Sid104

Therefore, the above table is in the form of 1NF.

INTERFACE

HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-</pre>
scale=1.0">
<meta http-equiv="X-UA-compatible" content="ie-edge">
<title>customer form</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<div class="main">
<div class="insert">
<h2>Insert into customers's database</h2>
<form id="cus" action="customer.php" method="POST">
<label for="C_Id">C_Id</label>
<div>
<input type="text" name="C_Id" id="C_Id">
</div>
```

```
<hr>>
<label for="C_Pass">C_Pass</label>
<div>
<input type="text" name="C Pass" id="C Pass">
</div>
<hr>>
<label for="Name">Name</label>
<div>
<input type="text" name="Name" id="Name">
</div>
<hr>>
<label for="Address">Address</label>
<div>
<br/><textarea name="Address" id="Address" cols="30"
rows="10"></textarea>
</div>
<hr>
<label for="Pincode">Pincode</label>
<div>
<input type="text" name="Pincode" id="Pincode">
</div>
<hr>>
<label for="P_Num">P_Num</label>
<div>
<input type="text" name="P_Num" id="P_Num">
</div>
<hr>>
<label for="Cart Id">Cart Id</label>
<div>
<input type="text" name="Cart_Id" id="Cart_Id">
</div>
<br>
<div>
<button type="submit" class="a" value="Insert">INSERT</button>
<button type="reset" class="a" value="reset">RESET</button>
</div>
</form>
```

```
</div>
</div>
</body>
</html>
CSS:
*{
  margin: 0;
  padding: 0;
body{
  background-image: url(ecom.jpeg.jpeg);
div.main{
  width: 400px;
  margin: 100px auto 0px auto;
h2{
  text-align: center;
  font-family: sans-serif;
  padding: 20px;
div.insert{
  background-color: rgba(0,0, 0, 0.5);
  width: 100%;
  font-size: 18px;
  border-radius: 10px;
  border: 1px solid rgba(255,255,255,0.3);
  box-shadow: 2px 2px 15px rgba(0,0,0,3);
  color: #fff;
form#insertion{
  margin: 40px;
label{
```

```
font-family: sans-serif;
  font-size: 18px;
#C_Id{
  border-radius: 5px;
input#C_Pass{
  border-radius: 5px;
input#Name{
  border-radius: 5px;
input#Address{
  border-radius: 5px;
input#Pincode{
  border-radius: 5px;
input#P_Num{
  border-radius: 5px
input#Cart_id{
  border-radius: 5px;
.a{
  border-radius: 8px;
  padding:10px;
  margin-right: 5px;
```

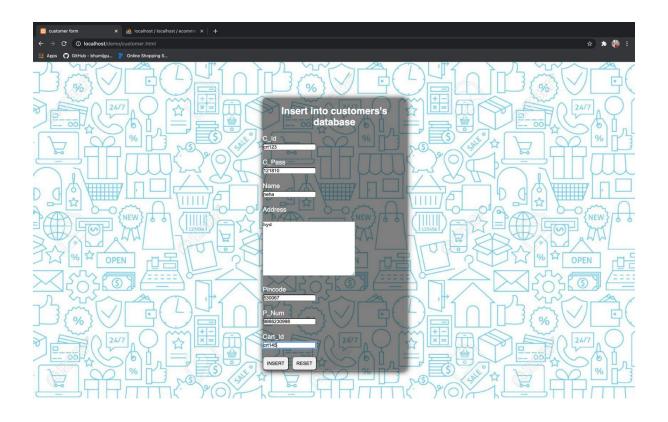


CONNECTIVITY

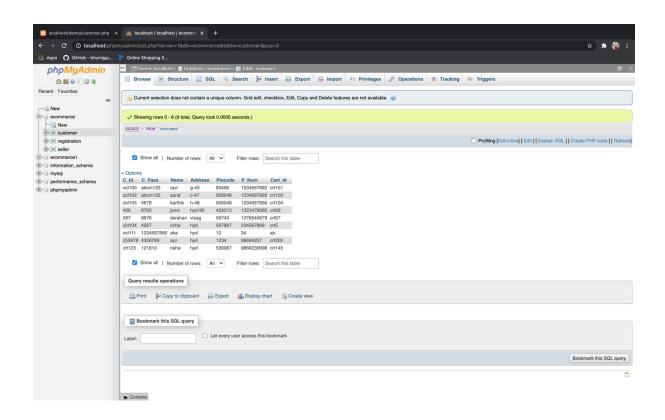
PHP:

```
<?php
$C_Id = $_POST['C_Id'];
$C_Pass = $_POST['C_Pass'];
$Name = $_POST['Name'];
$Address = $_POST['Address'];
$Pincode = $_POST['Pincode'];
$P_Num = $_POST['P_Num'];
$Cart_Id = $_POST['Cart_Id'];
$conn= new mysqli('localhost','root','''','ecommerce');
if($conn->connect_error) {
    die('connection failed:'.$conn->connect_error);
}
else {
    $a = $conn->prepare("insert into customer values(?,?,?,?,?,?,")");
```

```
$a-
>bind_param("ssssiis",$C_Id,$C_Pass,$Name,$Address,$Pincode,$P
_Num,$Cart_Id);
    $a->execute();
    echo "inserted successfully";
    $a->close();
    $conn->close();
}
```







HTML:

<!DOCTYPE html>

```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-</pre>
scale=1.0">
  <meta http-equiv="X-UA-compatible" content="ie-edge">
  <title>customer form</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <div class="main">
    <div class="insert">
  <h2>Insert into customers's database</h2>
  <form id="cus" action="select.php" method="POST">
    <label for="C_Id">C_Id</label>
    <div>
       <input type="text" name="C_Id" id="C_Id">
    </div>
    <br>
    <label for="C Pass">C Pass
    <div>
       <input type="text" name="C_Pass" id="C_Pass">
    </div>
    <hr>>
    <label for="Name">Name</label>
    <div>
       <input type="text" name="Name" id="Name">
    </div>
    <br>
    <label for="Address">Address</label>
    <div>
```

```
<br/><br><textarea name="Address" id="Address" cols="30"
rows="10"></textarea>
    </div>
    <br/>br>
    <label for="Pincode">Pincode</label>
    <div>
       <input type="text" name="Pincode" id="Pincode">
    </div>
    <br/>br>
    <label for="P_Num">P_Num</label>
    <div>
       <input type="text" name="P_Num" id="P_Num">
    </div>
    <br/>br>
    <label for="Cart Id">Cart Id</label>
    <div>
       <input type="text" name="Cart_Id" id="Cart_Id">
    </div>
    <hr>>
    <div>
       <button type="submit" class="a"
value="Insert">INSERT</button>
       <button type="reset" class="a"
value="reset">RESET</button>
    </div>
  </form>
</div>
</div>
</body>
</html>
```

PHP:

```
<?php
session start();
 $conn=mysqli_connect("localhost","root","","ecommerce");
 $query="SELECT * from customer ";
 $rs=$conn->query($query);
 if(srs-num rows>0) {
 echo "C_Id<th
style=color:blue;>C PassName<th
style=color:blue;>Address
 style=color:blue;>Pincode
 style=color:blue;>P_Num
 style=color:blue;>Cart Id";
 while($row=$rs->fetch_assoc()) {
  echo
"".$row['C_Id']."".$row['C_Pass']."".$ro
w['Name']."".$row['Address']."
  ".$row['Pincode']."
  ".$row['P_Num']."
  ".$row['Cart_Id']."
  ":
 echo "";
else {
"0 results";
mysqli_close($conn);
?>
```

OUTPUT:

