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**Semester:** 1<sup>st</sup> Sem

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**Section/Group:** 1-A

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## **PROJECT TITLE : CUSTOMER RELATIONSHIP MANAGEMENT**

### **Aim/Overview of the practical:**

#### **1. Task to be done:**

In this CRM (Customer Relationship Management) system, we've covered a range of tasks from front-end design to basic functionality. Here's a summary of the tasks that we've completed so far:

Tasks Completed in the CRM System:

#### **1. Basic Structure Setup:**

- **HTML Structure:** Set up the basic structure of the CRM system, including forms, buttons, tables, and fields for customer data entry.
- **PHP Backend:** Created the necessary PHP files to handle form submissions, database operations (e.g., adding, viewing, updating customers), and basic CRUD (Create, Read, Update, Delete) functionality.

#### **2. Database Design:**

- **Database Creation:** We designed a database to store customer information, including fields like id, name, email, phone, and address.
- **MySQL Integration:** We connected the CRM system to a MySQL database using PHP, ensuring data is inserted, updated, and fetched properly.
- **Auto-Increment and Primary Key:** We set up the primary key with auto-increment for the customer id, ensuring that each customer has a unique identifier

## 2. Code for experiment/practical:

### STEP 1. Create MySQL Database and Table

1. Open phpMyAdmin (via <http://localhost/phpmyadmin>).
2. Create a new database, e.g., `crm_db`.
3. Create a new table inside the `crm_db` database called `customers` as shown below:

#### Code:

```
CREATE TABLE `customers` (  
  `id` INT(11) NOT NULL AUTO_INCREMENT PRIMARY KEY,  
  `name` VARCHAR(100) NOT NULL,  
  `email` VARCHAR(100) NOT NULL,  
  `phone` VARCHAR(15) NOT NULL,  
  `address` TEXT NOT NULL);
```

phpmyadmin.php?route=/table/structure&db=crm\_db&table=customers

Server: 127.0.0.1 » Database: crm\_db » Table: customers

[Browse](#)
[Structure](#)
[SQL](#)
[Search](#)
[Insert](#)
[Export](#)
[Import](#)
[Privileges](#)
[Operations](#)

[Table structure](#)
[Relation view](#)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	<b>id</b>	int(11)			No	None		AUTO_INCREMENT	Change  Drop  More
<input type="checkbox"/> 2	<b>name</b>	varchar(100)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/> 3	<b>email</b>	varchar(100)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/> 4	<b>phone</b>	varchar(15)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/> 5	<b>address</b>	text	utf8mb4_general_ci		No	None			Change  Drop  More

☐ Check all
 ☐ With selected:
 [Browse](#)
[Change](#)
[Drop](#)
[Primary](#)
[Unique](#)
[Index](#)
[Spatial](#)

STEP 2. Create a project folder named **mini\_crm**

Inside the **mini\_crm** folder, create the following files:

### 1. Database Connection (config.php):

```
config.php
1  <?php
2  // config.php
3
4  $servername = "localhost";
5  $username = "root"; // default username for XAMPP/WAMP
6  $password = ""; // default password for XAMPP/WAMP
7  $dbname = "crm_db"; // your database name
8
9  // Create connection
10 $conn = new mysqli($servername, $username, $password, $dbname);
11
12 // Check connection
13 if ($conn->connect_error) {
14     die("Connection failed: " . $conn->connect_error);
15 }
16 ?>
```

### 2. Index.php

```
<?php
// index.php
include('config.php');

// Fetch all customers
$sql = "SELECT * FROM customers";
$result = $conn->query($sql);
?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Mini CRM</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
  <h1>MINI CRM</h1>

  <!-- Add Customer Form -->
  <h2>Add New Customers Details :</h2>
  <form action="add_customer.php" method="POST">
    <label for="name">Name:</label><br>
    <input type="text" name="name" required><br><br>

    <label for="email">Email:</label><br>
    <input type="email" name="email" required><br><br>

    <label for="phone">Phone:</label><br>
    <input type="text" name="phone" required><br><br>

    <label for="address">Address:</label><br>
    <textarea name="address" required></textarea><br><br>

    <input type="submit" value="Add Customer">
  </form>

  <h2>Customers List</h2>
  <table border="1">
    <tr>
      <th>ID</th>
      <th>Name</th>
      <th>Email</th>
      <th>Phone</th>
      <th>Address</th>
      <th>Actions</th>
    </tr>
    <?php
    if ($result->num_rows > 0) {
      while ($row = $result->fetch_assoc()) {
        echo "<tr>
          <td>{$row['id']}</td>
          <td>{$row['name']}</td>
          <td>{$row['email']}</td>
          <td>{$row['phone']}</td>
          <td>{$row['address']}</td>
          <td>
            <a href='edit_customer.php?id={$row['id']}'>Edit</a> |
            <a href='delete_customer.php?id={$row['id']}'>Delete</a>
          </td>
        </tr>";
      }
    }
  </table>
```

```
                </tr>";
            }
        } else {
            echo "<tr><td colspan='6'>No customers found</td></tr>";
        }
    ?>
</table>
</body>
</html>

<?php $conn->close(); ?>
```

### 3. Add Customer Logic (add\_customer.php)

```
add_customer.php
1  <?php
2  // add_customer.php
3  include('config.php');
4
5  if ($_SERVER['REQUEST_METHOD'] == 'POST') {
6      $name = $_POST['name'];
7      $email = $_POST['email'];
8      $phone = $_POST['phone'];
9      $address = $_POST['address'];
10
11     $sql = "INSERT INTO customers (name, email, phone, address)
12           VALUES ('$name', '$email', '$phone', '$address')";
13
14     if ($conn->query($sql) === TRUE) {
15         header('Location: index.php'); // Redirect to the customer list page
16     } else {
17         echo "Error: " . $sql . "<br>" . $conn->error;
18     }
19 }
20
21 $conn->close();
22 ?>
```

#### 4. Edit Customer Logic (edit\_customer.php)

```
<?php
// edit_customer.php
include('config.php');

if (isset($_GET['id'])) {
    $id = $_GET['id'];

    // Fetch customer details
    $sql = "SELECT * FROM customers WHERE id=$id";
    $result = $conn->query($sql);
    $customer = $result->fetch_assoc();
}

if ($_SERVER['REQUEST_METHOD'] == 'POST') {
    $name = $_POST['name'];
    $email = $_POST['email'];
    $phone = $_POST['phone'];
    $address = $_POST['address'];

    $sql = "UPDATE customers SET name='$name', email='$email', phone='$phone',
address='$address' WHERE id=$id";

    if ($conn->query($sql) === TRUE) {
        header('Location: index.php'); // Redirect to the customer list page
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }
}

?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Edit Customer</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h1>Edit Customer</h1>

    <form action="edit_customer.php?id=<?php echo $customer['id']; ?>" method="POST">
        <label for="name">Name:</label><br>
        <input type="text" name="name" value="<?php echo $customer['name']; ?>"
required><br><br>
```

```
<label for="email">Email:</label><br>
<input type="email" name="email" value="<?php echo $customer['email']; ?>"
required><br><br>

<label for="phone">Phone:</label><br>
<input type="text" name="phone" value="<?php echo $customer['phone']; ?>"
required><br><br>

<label for="address">Address:</label><br>
<textarea name="address" required><?php echo $customer['address'];
?></textarea><br><br>

<input type="submit" value="Update Customer">
</form>
</body>
</html>

<?php $conn->close(); ?>
```

## 5. Delete Customer Logic (delete\_customer.php)

```
<?php
// delete_customer.php
include('config.php');

if (isset($_GET['id'])) {
    $id = $_GET['id'];

    $sql = "DELETE FROM customers WHERE id=$id";

    if ($conn->query($sql) === TRUE) {
        header('Location: index.php'); // Redirect to the customer list page
    } else {
        echo "Error: " . $sql . "<br>" . $conn->error;
    }
}

$conn->close();
?>
```

## 6. Style.css

```
/* Global Styles */
body { font-family: Arial, sans-serif; color: black; line-height: 1.6; }

h1, h2, h3 { color: green; font-weight: bold; }

h4, h5, h6 { color: darkgreen; }

p { color: darkgray; }

a { color: green; text-decoration: none; font-weight: bold; }

a:hover { color: darkgreen; }

/* Messages */
.success-message, .error-message {
    padding: 10px; border-radius: 5px; font-size: 14px;
}
.success-message { background: honeydew; color: green; border: 1px solid green; }
.error-message { background: mistyrose; color: red; border: 1px solid red; }

/* Buttons */
button, .btn { background: green; color: white; padding: 10px 20px; border:
none; border-radius: 5px; cursor: pointer; transition: 0.3s; }

button:hover, .btn:hover { background: darkgreen; }

/* Table */
th { background: green; color: white; padding: 12px; }

td { padding: 10px; border-bottom: 1px solid lightgray; }

tr:hover { background: whitesmoke; }

/* Inputs & Textarea */
input, textarea { width: 40%; padding: 12px; margin: 10px 0; border: 2px solid
lightgray; border-radius: 5px; font-size: 16px; background: snow; }

input:focus, textarea:focus { border-color: green; background: white; }

input:hover, textarea:hover { border-color: green; background: whitesmoke; }

textarea { resize: vertical; min-height: 100px; }
```



## OUTPUT:

1.

### MINI CRM

#### Add New Customers Details :

Name:

Email:

Phone:

Address:

Add Customer

#### Customers List

ID	Name	Email	Phone	Address	Actions
No customers found					

## 2. Adding customers:

### MINI CRM

#### Add New Customers Details :

Name:

Email:

Phone:

Address:

Add Customer

#### Customers List

ID	Name	Email	Phone	Address	Actions
8	Prem	PREMKAKKAR5535@GMAIL.COM	07056415000	24IMC12508	<a href="#">Edit</a>   <a href="#">Delete</a>
9	a	abc@gmail.com	12125	0101010	<a href="#">Edit</a>   <a href="#">Delete</a>
10	x	xyz@gmail.com	000111	chandigarh	<a href="#">Edit</a>   <a href="#">Delete</a>
11	hari	hari@fun.com	909090	india	<a href="#">Edit</a>   <a href="#">Delete</a>

### 3. Editing / Deleting Customers :

#### Edit Customer

Name:

hari

Email:

hari@fun.com

Phone:

909090

Address:

panipat

Update Customer

Add Customer

#### Customers List

ID	Name	Email	Phone	Address	Actions
8	Prem	PREMKAKKAR5535@GMAIL.COM	07056415000	24IMC12508	<a href="#">Edit</a>   <a href="#">Delete</a>
10	x	xyz@gmail.com	000111	chandigarh	<a href="#">Edit</a>   <a href="#">Delete</a>
11	hari	hari@fun.com	909090	panipat	<a href="#">Edit</a>   <a href="#">Delete</a>

## **Learning Outcomes :**

### **1. Database Design and Management:**

- Understand how to design relational databases with tables, fields, and constraints (e.g., PRIMARY KEY, AUTO\_INCREMENT).
- Apply database normalization to reduce redundancy and ensure data integrity.

### **2. SQL Query Skills:**

- Write SQL queries for **CRUD operations**: Create, Read, Update, and Delete customer data.
- Use SQL to retrieve, insert, update, and delete records from the database.

### **3. PHP and MySQL Integration:**

- Connect a PHP application to a MySQL database and perform operations (e.g., fetching, adding, updating customer data).
- Handle form submissions and process user inputs securely.

### **4. Frontend Development:**

- Design basic HTML forms and tables to interact with the database.
- Apply CSS to create a user-friendly, visually appealing interface.

### **5. Web Application Development:**

- Build a simple CRM system that manages customer information using PHP and MySQL.
- Implement redirects and basic error handling in PHP.

**GITHUB REPOSITORY LINK:** <https://github.com/PREM2710/PL-SQL>