

CS 2001: Project : 2023

Group 28

Online Customer Relationship Management system



2021s18687	Opanayaka L. T.	s16340	2021s18687@stu.cmb.ac.lk
2021s18688	Panditawatta T. P. T. D.	s16341	2021s18688@stu.cmb.ac.lk
2021s18689	Pathum K. T.	s16342	2021s18689@stu.cmb.ac.lk
2021s18690	Perera H. A. P. S.	s16343	2021s18690@stu.cmb.ac.lk
2021s18691	Perera P. G. D.	s16344	2021s18691@stu.cmb.ac.lk

Content

1. Project Description
2. Functionalities
3. Database design
4. Conclusion
5. References



1. Project_Description

We are group No 28 and our task was to build an online customer relationship management (CRM) system. First “what is a CRM?” It is design to interact between a company and its customers. It aims to improve customer satisfaction, loyalty and business efficiency by a centralized platform for managing customer information and interactions.

Our team has developed an online Customer Relationship Management (CRM) web application tailored for an e-commerce platform. This application is designed to enhance the customer experience, facilitate administrative tasks, and ensure a smooth online shopping environment for both customers and administrators.

➤ objectives and features.

1. User-Centric Design:

- ❖ Our goal was create a user-friendly platform for online product purchases, incorporating login and signup functionality.
- ❖ 'Help' page was added to provide support and guidance to customers.

2. Empowering Administrators:

- ❖ Our object was to provide administrators with the tools they need to manage customer data effectively.

The 'Admin Page' offers features such as customer data manipulation and complaint handling.

- ❖ Admins have the ability to delete and update customer records, ensuring data accuracy and security.
- ❖ Administrators can view customer payment methods, calculate the grand total, and analyze the total price of products.

3. Customer Feedback and Ratings:

- ❖ We implemented a customer feedback system, enabling users to provide valuable input and suggestions.
- ❖ Customers can also rate products and leave feedback, providing valuable insights for product improvement.

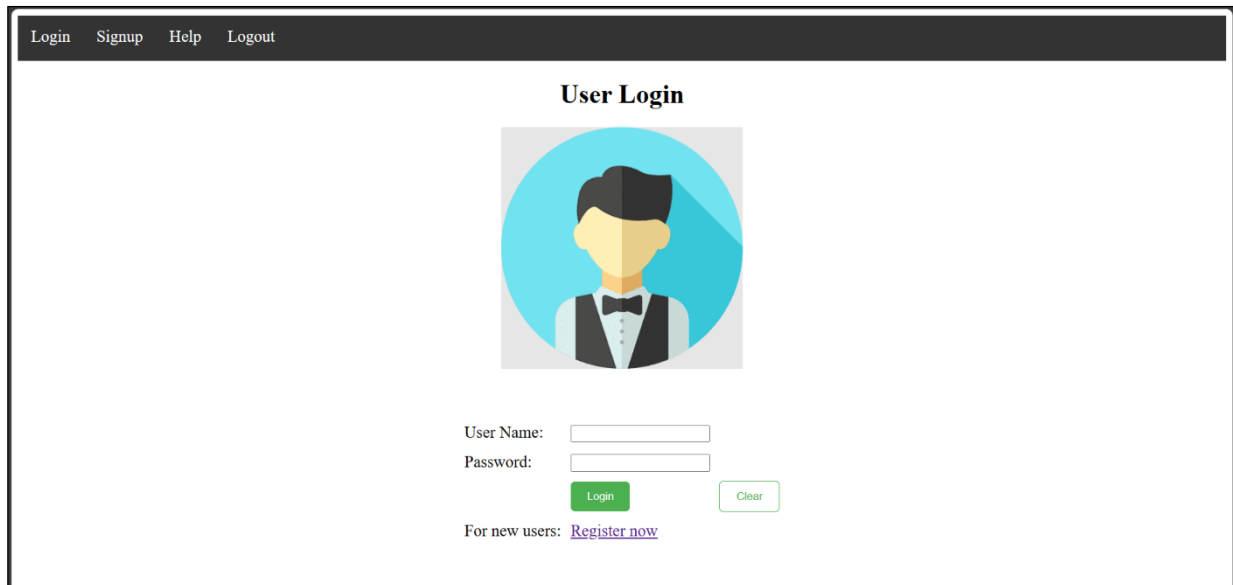
4. Order Tracking:

- ❖ To enhance the customer experience, we implemented an order tracking system, allowing customers to monitor the status and location of their orders.

2. Functionalities

1. User Functionalities

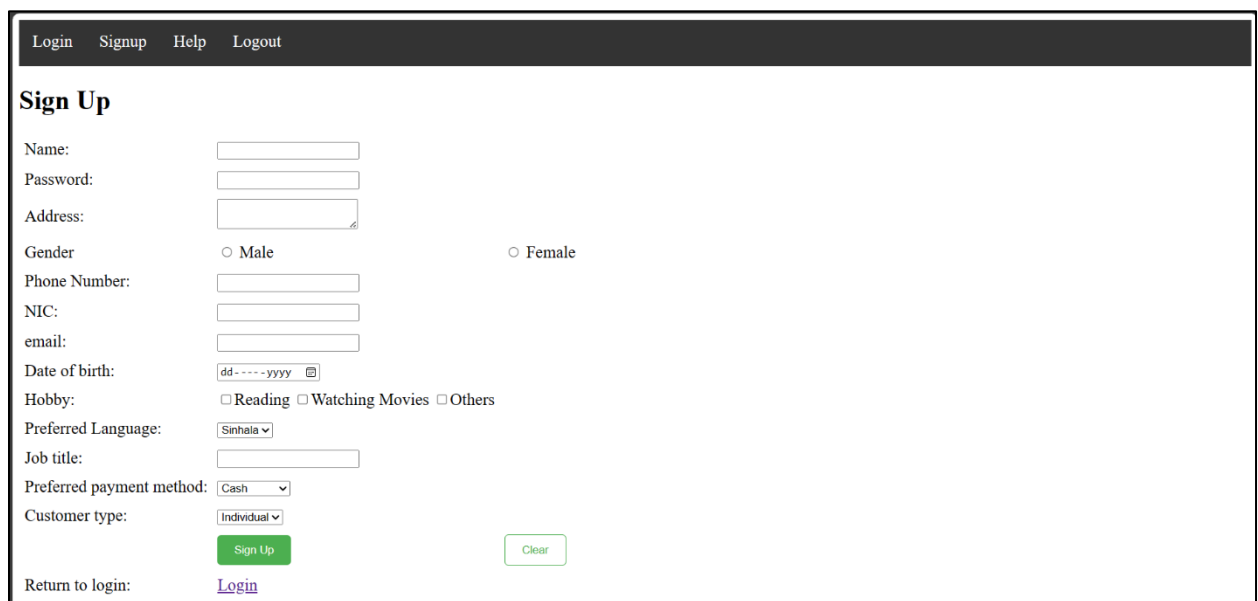
- If user already registered in the system, he can login to the system using his username and password.



The screenshot shows a web application interface for user login. At the top, there is a dark navigation bar with links for 'Login', 'Signup', 'Help', and 'Logout'. Below this, the main heading is 'User Login'. In the center, there is a circular profile picture placeholder showing a stylized person with dark hair and a bow tie. Below the profile picture, there are two input fields: 'User Name:' and 'Password:'. To the right of the 'Password:' field is a 'Clear' button. Below the input fields are two buttons: a green 'Login' button and a light green 'Clear' button. At the bottom, there is a link for new users: 'For new users: [Register now](#)'.

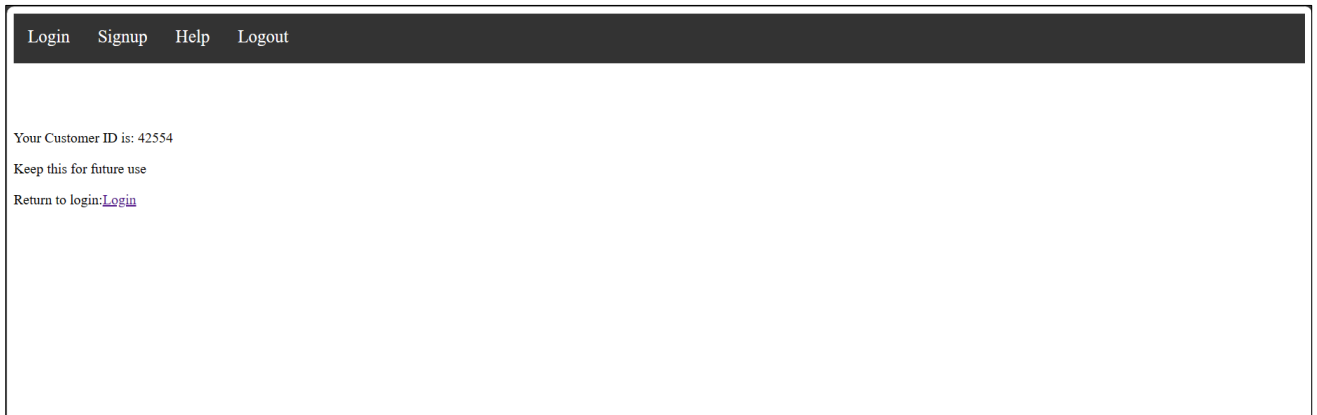
User can login using their username and password. For a new user click on “Register now”

- For new users, they have to register to login to the system. For this they can click on ‘Register now’ link on the page or click ‘Signup’ on the navigation bar. Then they can fill-out the form and register to the system.



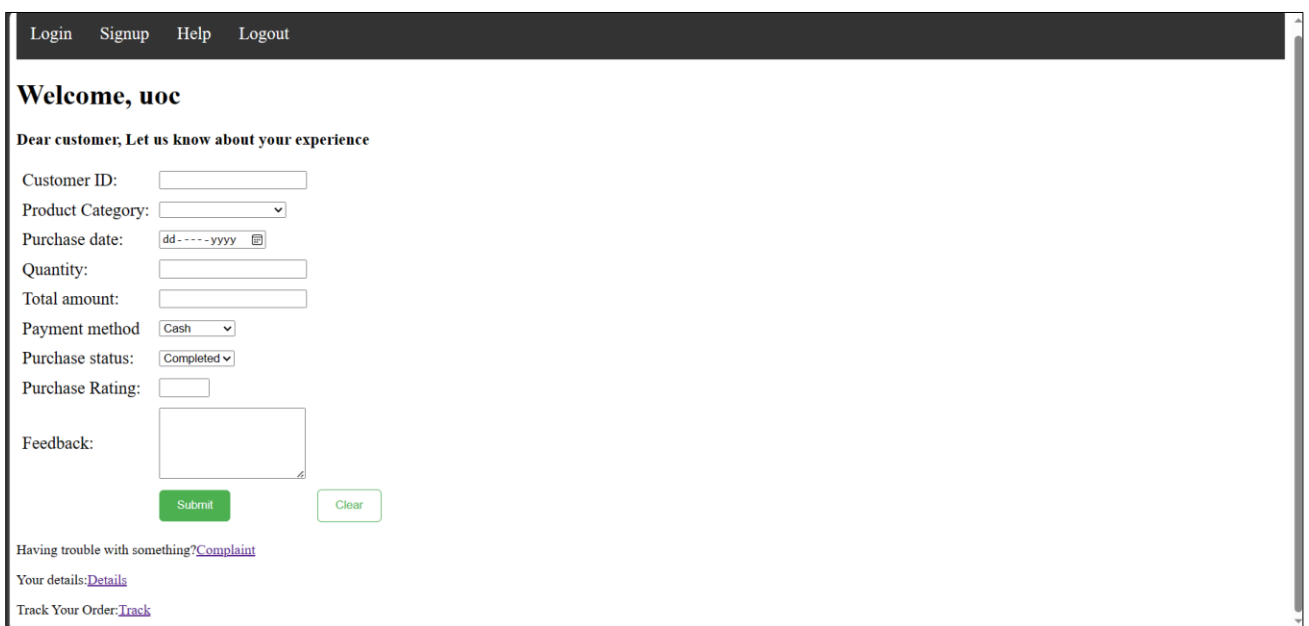
The screenshot shows a web application interface for user registration. At the top, there is a dark navigation bar with links for 'Login', 'Signup', 'Help', and 'Logout'. Below this, the main heading is 'Sign Up'. The form contains several input fields: 'Name:', 'Password:', 'Address:', 'Phone Number:', 'NIC:', 'email:', 'Date of birth:' (with a date picker), 'Hobby:' (with checkboxes for 'Reading', 'Watching Movies', and 'Others'), 'Preferred Language:' (with a dropdown menu showing 'Sinhala'), 'Job title:', 'Preferred payment method:' (with a dropdown menu showing 'Cash'), and 'Customer type:' (with a dropdown menu showing 'Individual'). There are two buttons: a green 'Sign Up' button and a light green 'Clear' button. At the bottom, there is a link for returning to login: 'Return to login: [Login](#)'.

- When new user fills the registration form and click on submit, the customer id of the user will appear on the page.



This screenshot shows a web page with a dark navigation bar at the top containing links for 'Login', 'Signup', 'Help', and 'Logout'. Below the navigation bar, the page displays the following text: 'Your Customer ID is: 42554', 'Keep this for future use', and 'Return to login: [Login](#)'.

- When user login, the following page will appear. In this page user can submit a feedback about a product they purchased.



This screenshot shows a web page with a dark navigation bar at the top containing links for 'Login', 'Signup', 'Help', and 'Logout'. Below the navigation bar, the page displays the following content:

- Welcome, uoc**
- Dear customer, Let us know about your experience**
- A feedback form with the following fields:
 - Customer ID:
 - Product Category:
 - Purchase date:
 - Quantity:
 - Total amount:
 - Payment method:
 - Purchase status:
 - Purchase Rating:
 - Feedback:
- Two buttons: 'Submit' and 'Clear'.
- Links at the bottom: 'Having trouble with something? [Complaint](#)', 'Your details: [Details](#)', and 'Track Your Order: [Track](#)'.

- This page also contains following functionalities,
 - **Complaint page**
 - When user clicked on 'Complaint' link, user will be directed to 'complaint.php' page. In this page user can make a complaint about a product they purchase. When the user submits the form, data will save in a database and can be viewed by admins.

[Login](#)
[Signup](#)
[Help](#)
[Logout](#)

Customer Complaints

Customer ID:

Product ID:

Order ID:

Complaint:

Your Complaints: [Complaints](#)

Back to Home: [Home](#)

Complaint page (complaint.php)

○ Track Complaint page

- In here user can track their complaints by clicking Your complaint link in complaint page. If user already made a complaint, they can view complaint status (Open, In progress, Resolved) and message given by admin.

[Login](#)
[Signup](#)
[Help](#)
[Logout](#)

Your Complaints

Customer ID:

Complaint Details for Customer ID: 42549

Complaint Status	Admin Message
Open	

Back to home: [Back](#)

- **User details page**

- When user clicked on 'Details' link, it will directed to User details page (details.php). In this page user can view their all details which they have submitted in registration.

Login Signup Help Logout

Your Account Details

Customer ID: 42549
First Name: Colombo
Last Name: University
Username: uoc
Address: colombo 7
Gender:
Phone Number:
NIC:
Email:
Date of Birth:
Hobby:
Customer ID: 42549
Preferred Language:
Job Title:
Preferred Payment Method:
Customer Type:

Back to Home: [Home](#)

- **Track Order page**

- Here user can track their order if they already place an order. When user enter the order id and submit, they can view order status.

Login Signup Help Logout

Order ID:

OK

Order Details for Order ID: 36

Order ID	Order Status
36	ordered

Back to home: [Home](#)

2. Administration Functionalities

- Admin functionalities have created to perform certain operations on data provided by customers. It also ensures that prevent any unauthorized persons from entering the admin page and altering the data.
- In admin home page, admin can view all the customer data of customers who have registered to the system. It also provides facility to delete any customer. It also ensures the data integrity as it does not delete any additional rows because it uses customer id to delete a customer which is unique to each customer.

[Login](#) [Signup](#) [Help](#) [Logout](#)

Welcome, admin

Current customer database

Customer ID	First Name	Last Name	Username	Address	Gender	Phone Number	NIC	Email	Date of Birth	Hobby	Preferred Language	Job Title	Preferred Payment Method	Customer Type
42549	Colombo	University	uoc	colombo 7										
42553			tharindu	jhgfdcvbnm	male	74547465	2000000015	tharindupanditawatta@gmail.com	2023-10-04	..	Sinhala		Cash	Individual
42543			dasuni	asdsfdg	female	745621458	20045487456	dasuni@gmail.com	2023-10-18	Reading, Watching movies	English	manager	Credit card	Business
42554			sameera	fbdvge	male	724587456	1999554411	sameera@gmail.com	2023-10-18	reading,,	Sinhala	hhh	Cash	Individual
42545	Tharindu	Darshana	tdarshana	kelaniya	male	74547465	200126547785	tharindupanditawatta@gmail.com	2007-11-14	Watching movies,,	Sinhala	manager	Debit card	Individual
42546	Dasun	Shanaka	dassa	54/2,colombo 7	male	758475682	19954785236	dasunl@gmail.com	2023-10-11	others,,	English	Cricketer	Credit card	Individual
42547	Pathum	Nissanka	pathuma	54/2,colombo 7	male	758475682	199814521455	amal@gmail.com	2023-11-08	others,,	Sinhala	Cricketer	Credit card	Individual
42548	Angelo	Mathews	angi	Colombo	male	758475682	199587452654	angi@gmail.com	2023-10-25	reading,,	Sinhala	Cricketer	Cash	Individual

Delete a customer

Customer ID:

Edit a customer: [Edit](#)

Stats: [Stats](#)

Complaints: [Complaints](#)

Admin home page (admin.php)

- Bottom of the admin page has several links.
 - **Edit**
 - In edit page admin can edit customer details provided by customer when they register to the system. It contains customer data table for ease of using edit option. Admin has to fill the form with where and what data they want to alter and click edit.

[Login](#)
[Signup](#)
[Help](#)
[Logout](#)

Customer ID	Name	Address	Gender	Phone Number	NIC	Email	Date of Birth	Hobby	Preferred Language	Job Title	Preferred Payment Method	Customer Type
42549	uoc	colombo 7										
42553	tharindu	jhgfdcvbm	male	74547465	2000000015	tharindupanditawatta@gmail.com	2023-10-04	..	Sinhala		Cash	Individual
42543	dasuni	asdsfdg	female	745621458	20045487456	dasuni@gmail.com	2023-10-18	Reading,Watching movies	English	manager	Credit card	Business
42554	sameera	fbdvdge	male	724587456	1999554411	sameera@gmail.com	2023-10-18	reading,,	Sinhala	hjh	Cash	Individual
42545	tdarshana	kelaniya	male	74547465	200126547785	tharindupanditawatta@gmail.com	2007-11-14	Watching movies,,	Sinhala	manager	Debit card	Individual
42546	dassa	54/2,colombo 7	male	758475682	19954785236	dasunl@gmail.com	2023-10-11	others,,	English	Cricketer	Credit card	Individual
42547	pathuma	54/2,colombo 7	male	758475682	199814521455	amal@gmail.com	2023-11-08	others,,	Sinhala	Cricketer	Credit card	Individual
42548	angi	Colombo	male	758475682	199587452654	angi@gmail.com	2023-10-25	reading,,	Sinhala	Cricketer	Cash	Individual

Edit form

Customer ID:
Name:
Address:
Gender: ☐ Male ☐ Female
Phone Number:
NIC:
email:
Date of birth:

Hobby: ☐ Reading ☐ Watching Movies ☐ Others
Preferred Language:
Job title:
Preferred payment method:
Customer type:

[Edit](#) [Clear](#)

Back to previous page: [Back](#)

Edit page (edit.php)

Stats

- This page contains some analyzed information of customer feedback, customer payment methods and other information such as grand total of sales, product-wise total of sales etc.

[Login](#)
[Signup](#)
[Help](#)
[Logout](#)

Customer payment method

Payment Method	Number of Customers
Cash	7
Debit card	1

Grand total

Grand Total of Total Amount: 32202

Total prices for products

Product Name	Total Amount
biscuit	7950
chocolate	1500
Home and Furniture	17502
ice-cream	1500
Sports and Outdoors	2500
Toys	1250

Customer Feedback

Customer ID	Product Category	Purchase Rating	Feedback
0	chocolate	4	good product
42541	biscuit	3	did not get yet
42544	ice-cream	4	good
56	Toys	4	ggwge4e
42512	Home and Furniture	3	jhgfdcvb

42512	Home and Furniture	3	jhgfdcvb
42512	biscuit	3	efrgg
42512	biscuit	3	wefg
42512	Home and Furniture	3	jhgfdcvb
42543	Home and Furniture	3	jhgfd
42543	Home and Furniture	3	jhgfd
42543	Home and Furniture	3	jhgfd
42549	Sports and Outdoors	3	kjuytrdsz
42549	Home and Furniture	3	jgf
45321	Home and Furniture	1	yes

Customer Messages

Message No.	Username	Phone number	Email	Subject
1	uoc	785645123	uoc@gmail.com	jtrsrzghugyf
11	15	758475682	abc@gmail.com	sssssss
10	uoc	74547465	kamal@gmail.com	I can not register
9	kusum	74547465	tharindupanditawatta@gmail.com	

Back to home: [Back](#)

Complaint

- This page allows admins to view customer complaints and edit complaint status and add a message to the customer so that the customer can view their complaint progress and any message given by admins.

[Login](#) [Signup](#) [Help](#) [Logout](#)

Customer ID	Product ID	Order ID	Complaint Status	Complaint	Admin Message
42545	23	66	In progress	yuiokjh	we are reviewing your status
42541	12	25	Open	fgh	
42544	12	52	Resolved	sdfs	we are done with you
42549	23	21	Open	product broken	

Customer ID:
Complaint Status:
Message to customer:

Back to Home: [Back](#)

Orders

- This page can be used to update the order status so that the customer can see the process of delivering the ordered product.

[Login](#)
[Signup](#)
[Help](#)
[Logout](#)

Customer ID	Product ID	Order ID	Order Status	Product Category
42514	12	36	Shipped	
42549	21	35	ordered	Toys

Order ID:
 Order Status:

Back to Home: [Back](#)

3. Database design

Database design is a fundamental process in data management. It involves creating a structured and efficient system for storing, managing, and retrieving data. The purpose of a well-designed database is to ensure data accuracy, consistency, security, and performance.

PHP scripts are responsible for establishing connections to the database, executing SQL queries, and displaying or processing data from those tables in web applications.

➤ Database

DBMS : MySQL (using WAMP server)
Database name : “abc”

Server: MySQL:3306 » Database: abc

Structure SQL Search Query Export Import Operations Privileges Routines Designer

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> complaint	★ Browse Structure Search Insert Empty Drop	12	MyISAM	latin1_swedish_ci	1.5 KiB	-
<input type="checkbox"/> contact_admin	★ Browse Structure Search Insert Empty Drop	6	MyISAM	latin1_swedish_ci	2.3 KiB	60 B
<input type="checkbox"/> customer_relation	★ Browse Structure Search Insert Empty Drop	10	MyISAM	latin1_swedish_ci	3.1 KiB	-
<input type="checkbox"/> employee	★ Browse Structure Search Insert Empty Drop	5	MyISAM	latin1_swedish_ci	1.2 KiB	-
<input type="checkbox"/> feedback	★ Browse Structure Search Insert Empty Drop	15	MyISAM	latin1_swedish_ci	3.1 KiB	-
<input type="checkbox"/> orders	★ Browse Structure Search Insert Empty Drop	1	MyISAM	latin1_swedish_ci	1.0 KiB	-
6 tables	Sum	49	InnoDB	latin1_swedish_ci	12.2 KiB	60 B

☐ Check all / Check tables having overhead

➤ Tables

1) Customer details table

Every new user must have to create an account to log in and fill signup form. “customer_relation” table has all details of each user.

Server: MySQL:3306 » Database: abc » Table: customer_relation

Browse Structure SQL Search Insert Export Import Privileges Operations

Showing rows 0 - 9 (10 total, Query took 0.0664 seconds)

`SELECT * FROM `customer_relation``

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all
 Number of rows: 25
 Filter rows:
 Sort by key: None

Extra options

	Customer_id	First_name	Last_name	Username	Password	Address	Gender	Phone_no	NIC	Email
<input type="checkbox"/> Edit Copy Delete	42549	Colombo	University	uoc	uoc	NULL	NULL	NULL	NULL	NULL
<input type="checkbox"/> Edit Copy Delete	42551	admin	admin	admin	admin	NULL	NULL	NULL	NULL	NULL
<input type="checkbox"/> Edit Copy Delete	42553			tharindu	sdsdfs	jhgfdcvbnm	male	74547465	2000000015	tharindupanditav
<input type="checkbox"/> Edit Copy Delete	42543			dasuni	145654	asdsfdg	female	745621458	20045487456	dasuni@gmail.co
<input type="checkbox"/> Edit Copy Delete	10			Gunawardana	12123	erter	male	745415876	200014587463	gunawardana@e
<input type="checkbox"/> Edit Copy Delete	11			Siriwardana	23231	erter	male	745415876	196245784512	NULL
<input type="checkbox"/> Edit Copy Delete	42545	Tharindu	Darshana	tdarshana	dar99	kelaniya	male	74547465	200126547785	tharindupanditav
<input type="checkbox"/> Edit Copy Delete	42546	Dasun	Shanaka	dassa	145541	54/2,colombo	male	758475682	19954785236	dasunl@gmail.co

Console

2) Employee details table

Server: MySQL:3306 » Database: abc » Table: employee

Browse Structure SQL Search Insert Export Import Privileges Operations

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

✓ Showing rows 0 - 4 (5 total, Query took 0.1102 seconds.)

```
SELECT * FROM `employee`
```

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

id	first_name	last_name	department	email
1	Peter	Doe	Operations	peter@gmail.com
2	Megan	Morel	Finance	
3	Rose	Bailey	Operations	rose@gmail.com
4	Linda	Bailey	Finance	
5	Mary	Doe	Sales	

☐ Show all | Number of rows: 25 | Filter rows: Search this table

3) Complaints

Server: MySQL:3306 » Database: abc » Table: complaint

Browse Structure SQL Search Insert Export Import Privileges Operations

```
SELECT * FROM `complaint`
```

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

Customer_id	Product_id	Order_id	Complaint_status	Complaint	Admin_msg
2	12	23	Resolved	the product was damaged	we done with your complaint. thank you for remaini...
3	24	32	In progress	product did not get yet	type here
42545	23	66	In progress	yuiokjh	we are reviewing your status
5	95	22	Open	hjk	NULL
42541	12	25	Open	fgh	NULL
42544	12	52	In progress	sd fs	type here
5465465	15	66	Open	sf as	NULL
5465465	15	66	Open	sf as	NULL
53145	12	36	Open	let us know the trouble	NULL
53145	12	36	Open	let us know the trouble	NULL
42549	12	13	Open	kjhg	NULL
42549	12	23	Open	kjhg f	NULL

Console

4) Contact administrator

Server: MySQL:3306 » Database: abc » Table: contact_admin

Showing rows 0 - 5 (6 total, Query took 0.0728 seconds.)

SELECT * FROM `contact_admin`

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	Message_no	Username	Phone_number	Email	Subject
<input type="checkbox"/> Edit Copy Delete	1	uoc	785645123	uoc@gmail.com	jtrsrxghugyf
<input type="checkbox"/> Edit Copy Delete	11	15	758475682	abc@gmail.com	sssssss
<input type="checkbox"/> Edit Copy Delete	10	uoc	74547465	kamal@gmail.com	
<input type="checkbox"/> Edit Copy Delete	9	kusum	74547465	tharindupanditawatta@gmail.com	
<input type="checkbox"/> Edit Copy Delete	13		0		
<input type="checkbox"/> Edit Copy Delete	14		0		

5) Feedback

Server: MySQL:3306 » Database: abc » Table: feedback

Showing rows 0 - 14 (15 total, Query took 0.1041 seconds.)

SELECT * FROM `feedback`

[Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	Book_id	Customer_id	Product_name	Purchase_date	Quantity	Total_amount	Payment_method	Purchase_status	Purchase
<input type="checkbox"/> Edit Copy Delete	1	0	chocolate	2023-10-04	5	1500	Cash	Completed	
<input type="checkbox"/> Edit Copy Delete	2	42541	biscuit	2023-10-04	3	450	Cash	Completed	
<input type="checkbox"/> Edit Copy Delete	3	42544	ice-cream	2023-10-04	2	1500	Cash	Completed	
<input type="checkbox"/> Edit Copy Delete	4	56	Toys	2023-10-03	5	1250	Debit card	Completed	
<input type="checkbox"/> Edit Copy Delete	5	42512	Home and Furniture	2023-10-04	3	2500	Cash	Pending	
<input type="checkbox"/> Edit Copy Delete	6	42512	Home and Furniture	2023-10-04	3	2500	Cash	Pending	
<input type="checkbox"/> Edit Copy Delete	7	42512	biscuit	2023-10-10	2	2500	Cash	Completed	

6) Orders

The screenshot shows a MySQL database interface with the following elements:

- Top bar: Server: MySQL:3306 » Database: abc » Table: orders
- Navigation tabs: Browse, Structure, SQL, Search, Insert, Export, Import, Privileges, Operations
- Warning message: Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.
- Status bar: Showing rows 0 - 0 (1 total, Query took 0.0686 seconds.)
- SQL query: `SELECT * FROM `orders``
- Actions: [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
- Controls: ☐ Show all | Number of rows: 25 | Filter rows: Search this table
- Extra options button
- Table structure and data:

Customer_id	Product_id	Order_id	Order_status	Product_name
2	12	36	ordered	

➤ Connecting Database

The php files that we used in our CRM system are hosted on the WAMP server. PHP is a server-side scripting language that allows to connect to the database and execute queries. We use PHP's MySQLi extension to establish a connection to the MySQL database.

Connection.php

```
1 <?php
2
3
4 // Connect to MySQL database
5 $servername = "127.0.0.1";
6 $username_db = "root";
7 $password_db = "";
8 $dbname = "abc";
9
10 $conn = new mysqli($servername, $username_db, $password_db, $dbname);
11
12 // Check connection
13 if ($conn->connect_error) {
14     die("Connection failed: " . $conn->connect_error);
15 }
```

4. Conclusion

- ❖ In conclusion, our Online Customer Relationship Management (CRM) web application is a good example of how computer science can make online selling better. We created this project to improve the online shopping experience for customers and give administrators the tools they need.
- ❖ We had goals: making the web application easy to use, helping administrators do their job, and letting customers share feedback and ratings. We also added a feature for tracking orders and checking what customers buy and how they pay.
- ❖ Our web application use to view how people pay, how much they spend, and what they like. This helps us understand our customers better. The things that we learned from this project will keep helping online stores and e-commerce sites get even better.

5. References

- ✓ <https://www.gosite.com/blog/what-is-a-crm-system-1>
- ✓ Youtube
- ✓ <https://www.w3schools.com/>