

# Project Report: Customer Management System

**Title:** Customer Management System

**Subtitle:** A simplified application for managing customers, products, and orders.

**Author:** Ankush P Gowda

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## Table of Content:

1. Introduction
2. Objectives
3. Features
4. System Design
  - a. Architecture
  - b. Data Structure
5. Implementation
6. Results

## 1. Introduction

**Purpose:** The Customer Management System (CMS) is a simplified project designed to manage customer information, track orders, and manage product inventory efficiently.

**Scope:** The CMS provides basic functionality for small businesses to:

- Add, view, update, and delete customer details.
- Manage product stock and prices.
- Record and display customer orders.

## 2. Objectives

- Simplify customer data management.
- Provide a centralized system for tracking orders and products.
- Implement a user-friendly interface for interacting with the database.

## 3. Features

- **Customer Management:** Add, view, update, and delete customer details.
- **Product Management:** Maintain a catalogue of products, including name, price, and stock quantity.

- **Order Management:** Record customer orders with selected products and quantities and Automatically calculate order totals.

## 4. System Design

### a. Architecture

The project uses a three-tier architecture:

- **Frontend:** Streamlit for the user interface.
- **Backend:** Python for handling business logic.
- **Database:** MySQL for storing and managing data.

### b. Data Structure

- **Customers:** Stores customer details.
- **Products:** Stores product information.
- **Orders:** Links customers and products to record purchases.

## 5. Implementation

### • File Structure

```
CMS/
|--- app.py
|--- backend.py
|--- pages
|--- requirements.txt
|--- Project Report.docs
```

### • Code Implementation

#### SQL Code

```
-- Create Database
CREATE DATABASE CMS;

-- Use the CMS Database
USE CMS;

-- 1. Admin Table
CREATE TABLE Admin (
    AdminID INT AUTO_INCREMENT PRIMARY KEY,
    Email VARCHAR(50) NOT NULL UNIQUE,
    Password VARCHAR(255) NOT NULL,
);

-- 2. Customers Table
CREATE TABLE Customers (
```

```

CustomerID INT AUTO_INCREMENT PRIMARY KEY,
FirstName VARCHAR(100) NOT NULL,
LastName VARCHAR(100) NOT NULL,
Email VARCHAR(100) NOT NULL UNIQUE,
Password VARCHAR(255) NOT NULL,
Phone VARCHAR(15),
Address TEXT
);

-- 3. Products Table
CREATE TABLE Products (
    ProductID INT AUTO_INCREMENT PRIMARY KEY,
    Name VARCHAR(100) NOT NULL,
    Description TEXT,
    Price DECIMAL(10, 2) NOT NULL,
    StockQuantity INT DEFAULT 0,
    ProductImage VARCHAR(255) NULL;
);

-- 4. Orders Table
CREATE TABLE Orders (
    OrderID INT AUTO_INCREMENT PRIMARY KEY,
    CustomerID INT NOT NULL,
    OrderDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    TotalAmount DECIMAL(10, 2) NOT NULL,
    OrderStatus VARCHAR(50) DEFAULT 'On the way';
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID) ON DELETE CASCADE
);

-- 5. OrderDetails Table
CREATE TABLE OrderDetails (
    OrderDetailID INT AUTO_INCREMENT PRIMARY KEY,
    OrderID INT NOT NULL,
    ProductID INT NOT NULL,
    Quantity INT NOT NULL,
    FOREIGN KEY (OrderID) REFERENCES Orders(OrderID) ON DELETE CASCADE,
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID) ON DELETE CASCADE
);

-- 6. Basket Table
CREATE TABLE Basket (
    BasketID INT AUTO_INCREMENT PRIMARY KEY,
    ProductID INT NOT NULL,
    CustomerID INT NOT NULL,
    Quantity INT NOT NULL,
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID) ON DELETE CASCADE,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID) ON DELETE CASCADE
);

```

- Screenshots

## Login Page

Deploy

### Login

Enter your Email

Enter your password

Submit

Dont have account. [New Customer?](#)

## Signup Page

Deploy

### Sign Up

First Name

Last Name

Email

Create Password

Confirm Password

Phone Number

Address

Submit

[Back to login](#)

## Admin side customer management page

Welcome Admin !

Manage Customers

Manage Products

Manage Orders

Logout

Customers

First Name:	Last Name:	Email:	Phone Number:	Address:	Action:
Ankush P	Gowda	<a href="mailto:ankushgowda@gmail.com">ankushgowda@gmail.com</a>	+91-7259120176	Whitefield, Bengaluru-67	<div>Edit</div> <div>Delete</div>

## Admin side product management page

Welcome Admin !



Manage Customers

Manage Products

Manage Orders

Logout

Products

Product:	Product Name:	Description:	Price:	Stock Quantity:	Action:
	Razer Basilisk V3	This wired, all-purpose gaming mouse has an ergonomic shape, nine programmable buttons, a dual-mode scroll wheel, and lots of RGB lighting. It also comes in a wireless version.	\$ 150.00	18	<div>Edit</div> <div>Delete</div>
	Razer Huntsman Mini	Razer Optical Switches for actuation at the speed of light: Offers faster, lighter, and smoother actuations than mechanical switches, and lasts longer as it requires fewer moving parts that operate with less friction. Comes in two variants—Linear and Clicky.	\$ 450.00	5	<div>Edit</div> <div>Delete</div>

## Admin side order management page

Welcome **Admin !**

Manage Customers

Manage Products

Manage Orders

Logout

### Orders

Order ID:	Customer First Name:	Order Details :	Total Paid:	Order Status:	Action:
1	Ankush P	Razer Basilisk V3 ----- 1 units Razer Huntsman Mini ----- 1 units	\$ 600.00	Delivered	<div>Delivered</div> <div>Cancel</div> <div>Refunded</div>
2	Ankush P	Razer Basilisk V3 ----- 2 units Razer Huntsman Mini ----- 1 units MM500 v2 Hybrid Cloth Gaming Mouse Pad - Extended ----- 3 units	\$ 900.00	Refunded	<div>Delivered</div> <div>Cancel</div> <div>Refunded</div>
3	Ankush P	Razer Huntsman Mini ----- 5 units	\$ 2250.00	On the way	<div>Delivered</div> <div>Cancel</div> <div>Refunded</div>
4	Ankush P	Razer Basilisk V3 ----- 2 units	\$ 300.00	Cancelled and Refund Issued	<div>Delivered</div> <div>Cancel</div>

## Ecommerce page for customer

Welcome **Ankush P !**



Store

Basket

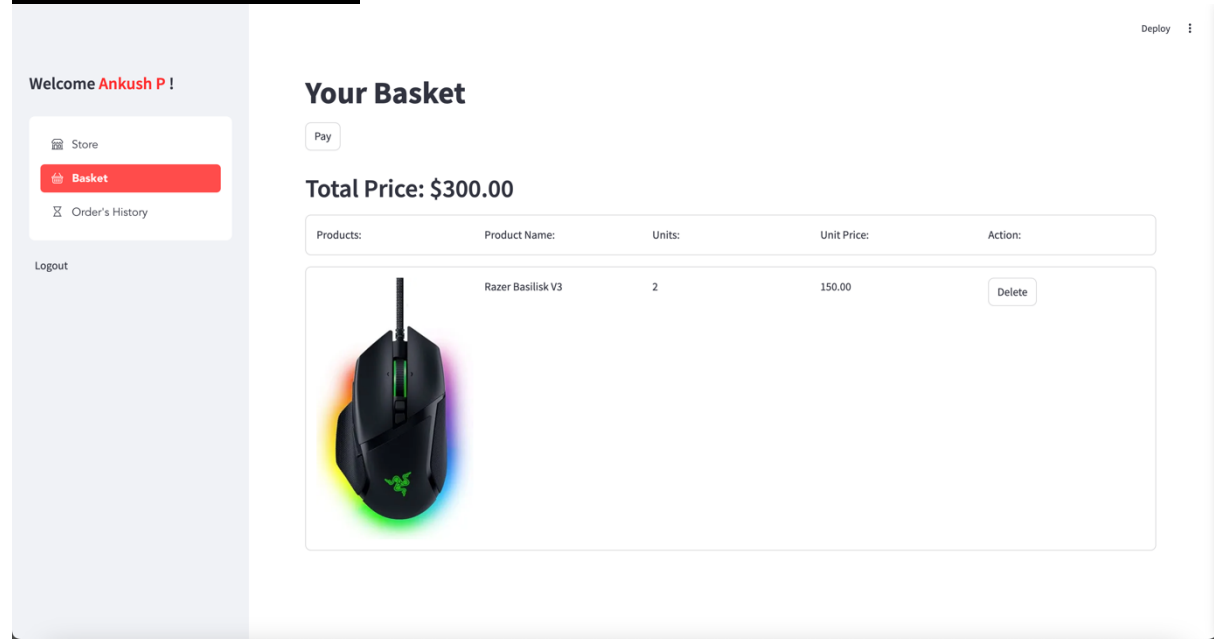
Order's History

Logout

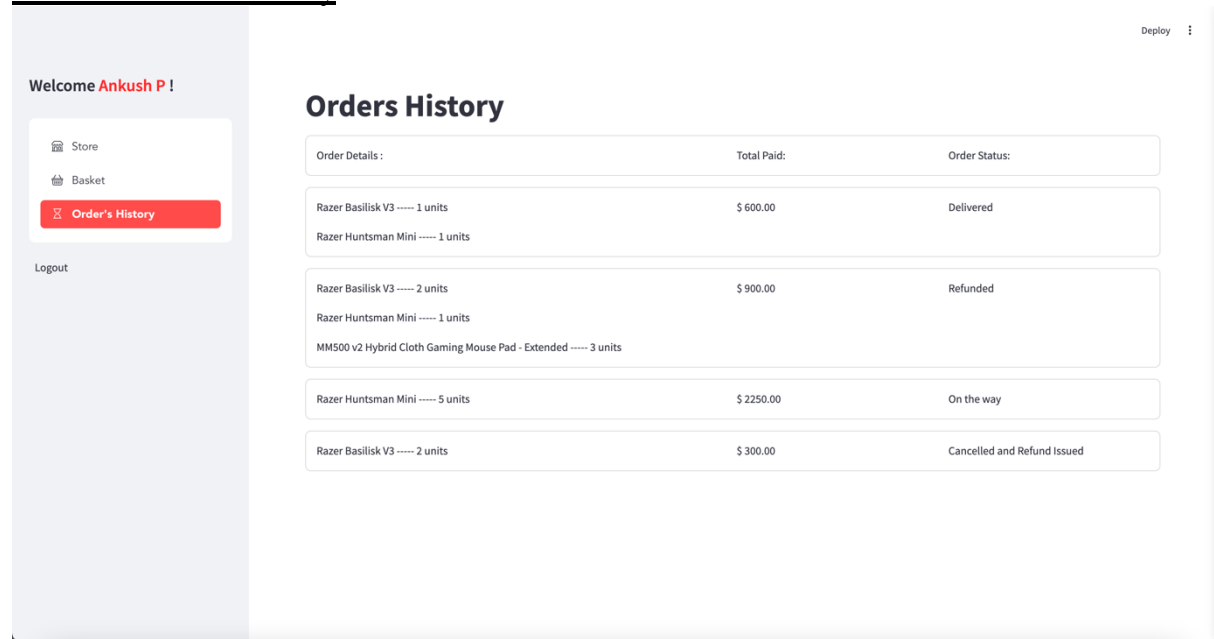
### Store

Product:	Product Name:	Description:	Unit Price:	Stock Quantity:	Action:
	Razer Basilisk V3	This wired, all-purpose gaming mouse has an ergonomic shape, nine programmable buttons, a dual-mode scroll wheel, and lots of RGB lighting. It also comes in a wireless version.	\$ 150.00	<div>Add Units</div> <div>0 - +</div> <div>Add</div>	
	Razer Huntsman Mini	Razer Optical Switches for actuation at the speed of light: Offers faster, lighter, and smoother actuations than mechanical switches, and lasts longer as it requires fewer moving parts that operate with less friction. Comes in two variants—Linear and Clicky.	\$ 450.00	<div>Add Units</div> <div>0 - +</div> <div>Add</div>	

## Basket page for customer



## Customer order history



## 6. Results

- Successfully implemented a functional CMS with basic customer, product, and order management.
- User-friendly interface for CRUD operations.
- Seamless integration of database and backend logic.