

Customer Management System

1. Overview

1.1. What:

- Customer Management System is an application designed to manage customer data for businesses, including details about customers, their transactions, feedback, and support interactions.
- It provides features such as viewing customer profiles, tracking purchases or service requests, managing customer feedback and satisfaction levels, handling customer inquiries, and updating customer-specific details (e.g., contact information, address, purchase history, and service subscriptions).
- The system also allows businesses to categorize customers based on their engagement or transaction history, identify loyal customers, and manage marketing campaigns and promotions targeted to specific customer segments.
- This web-based application runs on a browser and is accessible within the business's Local Area Network (LAN).
- The database used for storing customer information and transactions is powered by MySQL.

1.2. Why:

- This system is valuable for businesses across various industries, including retail, e-commerce, banks, hospitality, and service providers.
- It enables businesses to efficiently manage customer relationships by keeping detailed records of interactions, tracking customer satisfaction, and improving customer retention strategies.
- The application helps businesses to identify top customers, improve customer service, and offer targeted promotions to increase sales and enhance customer loyalty.

1.3. How:

- Backend: MySQL, SQL, and Python
- Frontend: Streamlit

2. Database Structure

Database - CMS

Customer

Customer_ID (Primary_Key)
Customer_Name
Password
Contact_No
Email_ID
Address
Date_of_Birth
Gender
Registration_Date
Manager_ID

Manager

Manager_ID (Primary_Key)
Password

Manager_Name
Contact_No
Email_ID
Department_ID

Department

Dept_ID (Primary_Key)
Dept_Name
Manager_ID

Customer_Support_Requests

Request_ID (Primary_Key)
Customer_ID
Purchase_ID
Product_ID
Request_Date
Request_Description
Request_Status
Assigned_Manager_ID

Purchases

Purchase_ID (Primary_Key)
Customer_ID
Product_ID
Purchase_Date
Quantity
Total_Amount

Products

Product_ID (Primary_Key)
Product_Name
Price
Category

Customer_Feedback

Feedback_ID (Primary_Key)
Customer_ID
Product_ID
Feedback_Date
Rating
Feedback
CRM_Response

Loyalty_Program

Customer_ID
Points_Earned
Points_Redeemed
Last_Redeemed_Date

3. Features and Roles

Customer:

- View Personal Information
- Update Personal Information
- View Purchases
- Submit Support Request
- View Support Request Status
- Submit Feedback
- View Loyalty Points

Customer Relationship Manager:

- View Customer Information
- Add New Customer
- Delete Customer
- Update Customer Details
- View Customer Support Requests
- Assign Support Requests to Support Manager
- View & Respond to Customer Feedback
- Manage Loyalty Program (Redeem/Update Points)

Support Manager:

- View All Support Requests
- Update Support Request
- Generate Support Reports
- View Customer Purchases

Sales Manager:

- Upload Sales Data
- Generate Sales Report
- View Product Feedback

Product Manager:

- View All Products
- Add New Products
- Update Products
- Delete Products
- Update Product Categories
- View Product Feedback

4. SQL commands and tables

See [CMS Tables.sql](#)

5. Main streamlit python code

See [main.py](#)

6. Streamlit application demonstration

See [app_demo.mp4](#)