Household Services App

V1

HomeZen

Project Report by Raj Mahajan

23f1001305

Modern Application Development – I

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Student Details:

Name: Raj Shyam Mahajan

Roll No: 23f1001305

Email: 23f1001305@ds.study.iitm.ac.in

About me: I am Raj Shyam Mahajan, a dedicated student pursuing a Dual Degree in B.Tech Automation and Robotics and BS in Data Science and Application. My passion lies in creating impactful projects that contribute to societal advancement and hold significant value for future generations. I have a strong penchant for learning and constantly seek to expand my knowledge base to simplify complex challenges and enhance daily living. Through my interdisciplinary studies, I have acquired the necessary skills and expertise to address multifaceted issues at the convergence of technology and data science. My commitment to continuous improvement drives me to explore new concepts and technologies, with the aim of leveraging my expertise to drive positive change and innovation in our society.

Project Description:

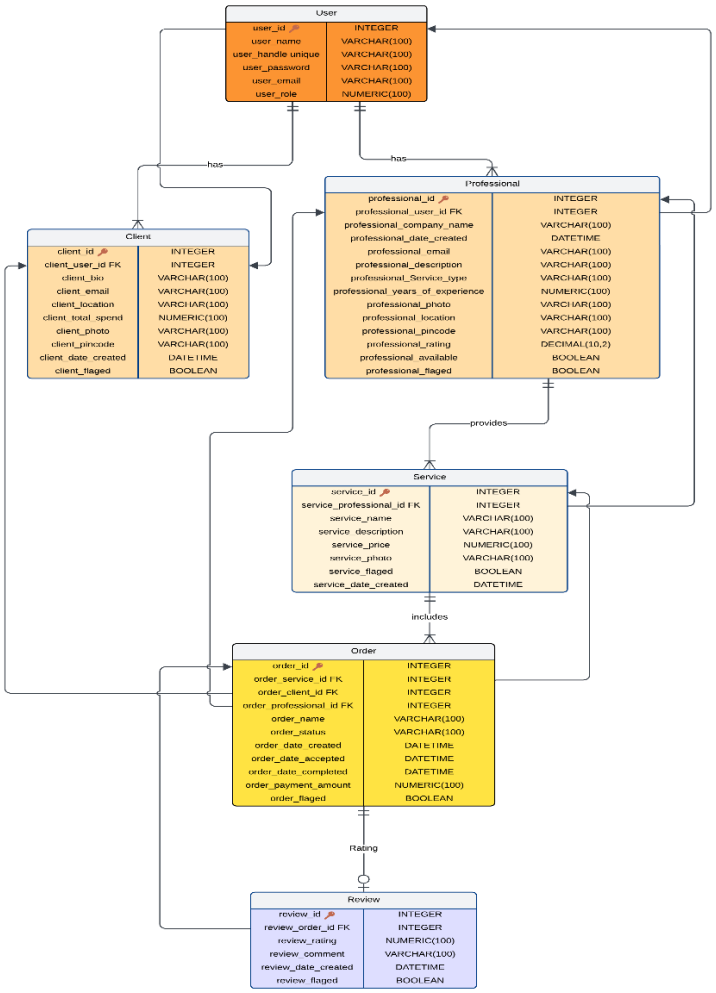
The **Household Services Application** is a user-friendly platform that simplifies the booking of household services like cleaning, tutoring, and childcare. It allows customers to easily find and schedule services while enabling professionals to expand their client base and earn more. Key features include secure user authentication, service discovery, profile management, a dashboard for tracking bookings and earnings, and a ratings system for trust and transparency. Built with modern technologies like Flask and MySQL, the platform offers a seamless experience for both users and service providers.

Approach to the Problem Statement:

As a core background student with no prior experience in Flask or web development, I took on this project alongside MAD-1 coursework. I began by learning Flask basics through a tutorial by IIT madras and Web docs, implementing features like login, signup, and CRUD operations. Despite challenges with DBMS concepts, I maintained a structured workflow with daily to-do lists.

By prioritizing user roles and key features.This experience showcased adaptability, persistence, and the ability to learn and implement new CS concepts effectively.

ER Diagram:



Frameworks And Libraries:

Backend:

1. ***Flask*** - Python web framework for building the application
2. ***SQLAlchemy*** - ORM for database management and queries
3. ***SQLite*** - Database system for storing application data
4. ***Flask-Login*** - User authentication and session management
5. ***Werkzeug*** - Password hashing and security utilities
6. ***OpenPyXL*** - Excel file generation and handling

Frontend:

1. ***HTML5*** - Structure and content
2. ***Bootstrap 5*** - CSS framework for responsive design
3. ***Google Charts*** - Data visualization and charts
4. ***Jinja2*** - Template engine for dynamic content

Additional Features:

1. Excel File Generation.
2. Flash Messages.
3. Reactive and Adaptive UI .

API EndPoints:

- Home API *Address*: / *Method*: GET, POST
- User Login API *Address*: /login *Method*: GET, POST
- User Registration API *Address*: /register *Method*: GET, POST
- User Logout API *Address*: /logout *Method*: GET, POST
- User Dashboard API *Address*: /dashboard *Method*: GET,
- Service Search API *Address*: /search *Method*: GET, POST
- User Logout API *Address*: /profile *Method*: GET, POST

Project Video:

Youtube Link: https://youtu.be/10RS5EVtGEg