

# Household Services App - V1

Project Report by Chitranshu Harbola

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Modern App Development - 1

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## Student details

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**About me** - I am active researcher in the field of AI, GenAI to be specific. I like create ed-tech Youtube videos. Recently did paid internship on AI for trading systems (OCT-NOV). Published a paper on LLMs for educations which got accepted on AIMLSystems Conference USA. Fortunate to visit ISB Hyderabad for a GPU cluster setup under the internship for our development purpose that taught many new lessons and corporate behaviours.

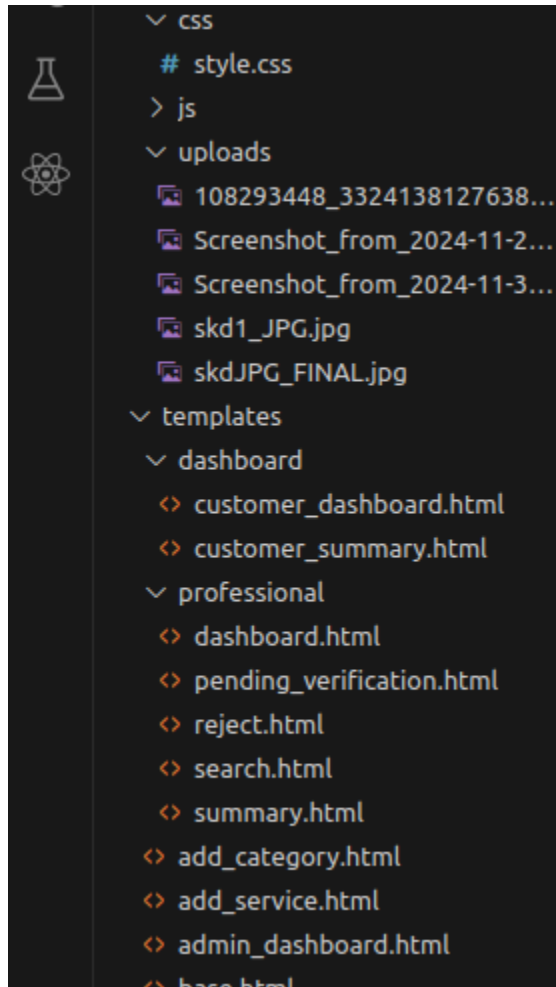
## Project Description

This platform serves as a comprehensive ecosystem connecting homeowners, service professionals, and administrators to streamline the provision and management of house-related services. Designed to facilitate seamless interactions, the platform includes dedicated interfaces for administrators, professionals, and customers, ensuring an efficient and user-friendly experience for all stakeholders.

## How I approached the problem statement

Starting this project with no prior experience in Flask and simultaneously managing the MAD-1 project and theory course was initially overwhelming. The thought of meeting the October deadline while learning new technologies made me anxious. However, today, on **October 18th**, I'm thrilled to have successfully completed the project—a testament to perseverance and learning on the go. I began by following a tutorial by TechWithTim, which provided a solid introduction to Flask. This tutorial taught me fundamental functionalities like login, signup, and CRUD operations for a single entity, "note." These basics gave me a clear understanding of Flask's workflow and structure, which I used as the foundation for my project.

I started by creating the login and signup forms to ensure user authentication was in place. Once this was functional, I moved on to implementing features for the primary users—professionals and customers. The admin section, being more complex, was deferred to later stages.



### Facing Database Constraints:

At the start, I hadn't watched the DBMS lectures beyond week 1, leaving me unfamiliar with foreign keys and other database constraints. This lack of knowledge led to numerous errors, but my determination kept me moving forward. I used Flask documentation and online forums to troubleshoot and learn on the fly. Rigorous Initial Phase: From **October 1st** to **October 6th**, progress was slow and challenging. The unfamiliarity with both Flask and database concepts made this phase intense. However, these early struggles laid the groundwork for smoother development later.

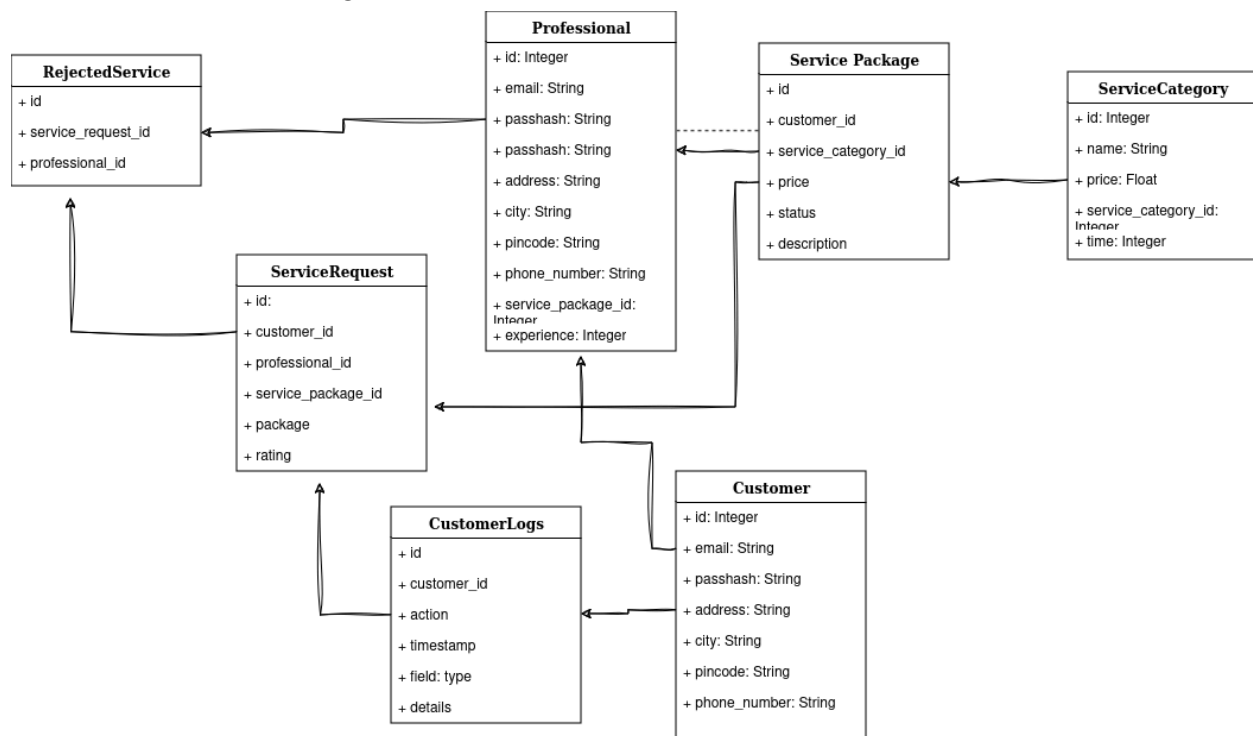
As I gained confidence, my approach became more organized. I started working with a structured to-do list, prioritizing tasks and setting daily goals for feature implementation. This helped me focus on critical aspects without feeling overwhelmed, allowing me to get into a productive rhythm.

## Final Outcome

By maintaining a proactive and methodical approach, I managed to complete the project well before the first deadline in October. The process of overcoming initial challenges and learning on the go was deeply rewarding. It highlighted the importance of perseverance, adaptability, and a willingness to learn in achieving project goals.

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## DataBase Schema Design



## Technologies Used

- 1)Flask: Backend framework for building the web application.
- 2)SQLAlchemy: ORM (Object-Relational Mapping) tool for database interactions.
- 3)SQLite: Database management system for storing application data.
- 4)HTML/CSS/JavaScript: Frontend technologies for user interface design and interactivity. Also usedTailwind CSS apart from vanilla CSS.
- 5)Flask-Login: Extension for managing user sessions and authentication.

- 6)Datetime: Python library for handling date and time operations.
- 7)Jinja2: Template engine for rendering dynamic HTML content.
- 8)Werkzeug: Utility for securely managing passwords and authentication.
- 9)ChartJS: User for creating different types of charts on the admin dashboard.

Video link :

<https://drive.google.com/file/d/1FWSw1KwK3CFhX76AhcVdBkVKo2xT61sl/view?usp=sharing>