PROJECT REPORT

HOUSEHOLD SERVICES

Student Details:

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Level: Diploma in Programming
Program: BS Degree in Data Science and Applications

Project Details:

Question Statement: To create a multi-user application which acts as a platform for providing comprehensive home servicing and solutions. The distinct users on the web application involves an ADMINISTRATOR for administering the site, a PROFESSIONAL who provides services and a CUSTOMER who makes requests and makes use of these services.

Technologies Used: The technologies used in making of the application are basically divided into two categories: *Frontend* and *Backend*.

For the backend

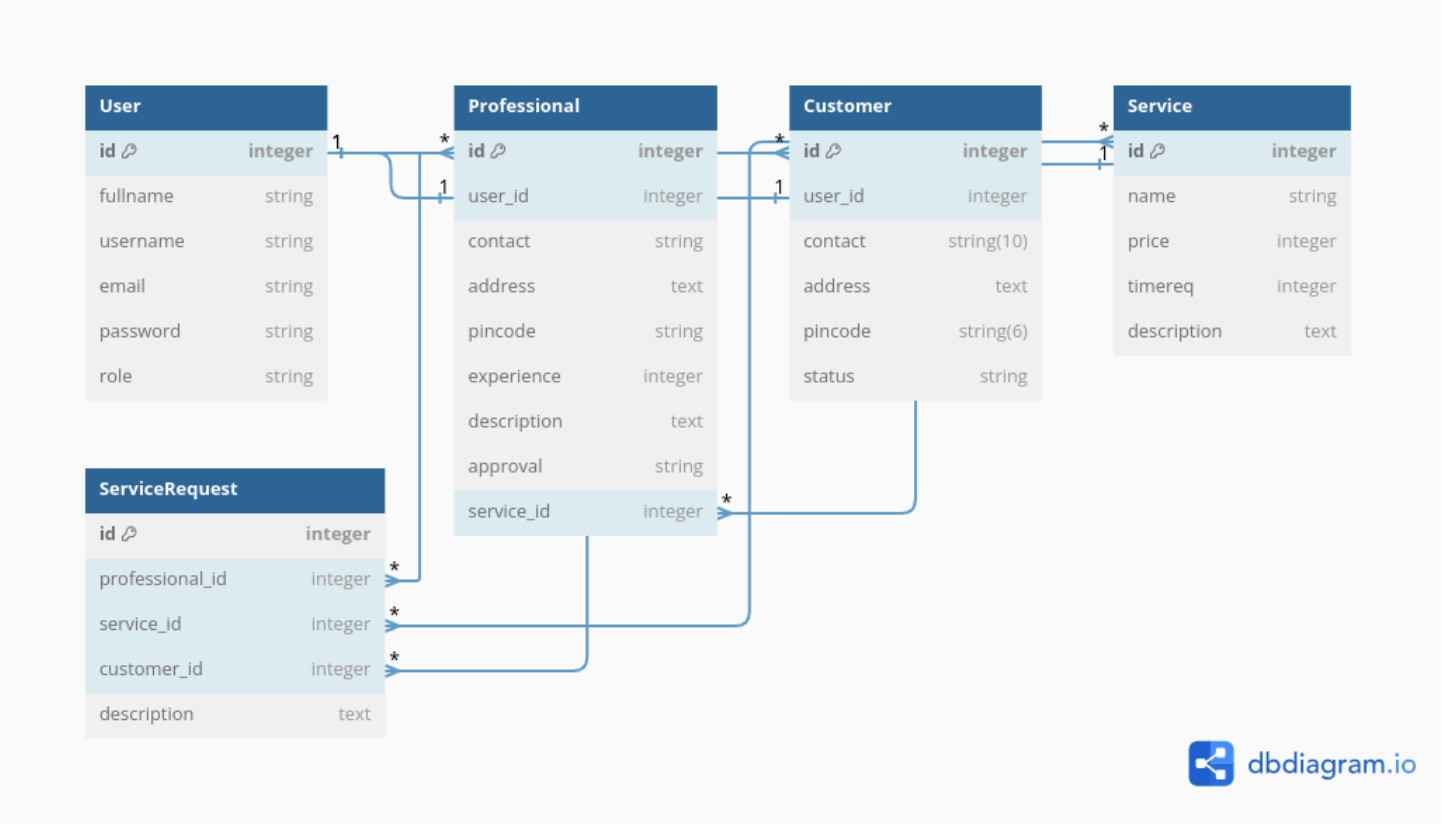
- flask framework
- SQLite, SQLAlchemy ORM and flask_sqlalchemy for database, translating SQL database queries to OOP model and also for integrating it with Flask
- WTForms and flask_wtf for creating forms and handling forms' data validation and also for integrating with Flask
- flask_login for managing user logins and login views

For the frontend

- HTML and CSS for creating the user interface interaction
- Jinja templates from flask for creating reusable layouts

Solving Approach:

1. First, we have created all the necessary database models using sqlalchemy. The User database model consists of all the users and its attributes are common to all users like name, username, email, password etc. The models Professional and Customer created afterwards will reference the User. We will manually create the admin user ourselves.
2. The Service model is created to save the specific service metadata like name, price, time required etc. The ServiceRequest is created for the requests made by customers for a service. It references the models Service, Professional and Customer.
3. After creating the models we created the registration and login views from HTML and Jinja templates. These views, when interacted successfully, will redirect the user to their respective dashboard home. So we have also created templates for subsequent views depending on the role of the user (admin, customer and professional).
4. After creating the templates for various kinds of users, we will style the appearance through CSS styling sheets to make the user experience smooth and for improving the aesthetic.



Entity Relationship Diagram for Household Services Project

The Actual Project:

- The project is available on GitHub as a repository. The repository contains all the code and this project report in it. Link for repo: [Github]
- The working demo for the project is also made available as a screen video recording uploaded on Google Drive. Link for demo: [Google Drive]