

A to Z Household Services

HouseHelp Hub

MODERN APPLICATION DEVELOPMENT – 1

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Project Submitted By

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About me

I'm Amanullah, passionate about development and building impactful applications. I love exploring new languages and frameworks. In competitive programming (DSA), I've achieved the Knight rank on LeetCode, showcasing my problem-solving skills and dedication.

Project Description

The Househelp Hub Services Application is a multi-user platform designed for booking and managing home services like plumbing, AC servicing, and more. It includes roles for Admin, Service Professionals, and Customers. Admins manage services, users, and service requests, while professionals accept/reject tasks. Customers can search services, place requests, view details, and post reviews. Admins can create, update, or delete services with base prices. Built using Flask, Jinja2, Bootstrap, and SQLite, the app provides a responsive UI with real-time updates, service management, user monitoring, and seamless interactions across all user roles.

Approach to the Problem

As I am currently pursuing MAD1 theory this term, I have prior knowledge of Flask, SQLAlchemy, and related technologies. I began by thoroughly reviewing the problem statement to understand the core requirements of the project. Next, I focused on designing the

application's logic and flow. I started by creating the login and signup pages for the Admin, Customer, and Service Professional roles, incorporating backend validation. Once the user authentication system was set up, I proceeded to work on the core features for Admin, Service Professionals, and Customers, focusing on the application models and the essential logic. I also worked on routing and ensuring smooth navigation between different sections of the app.

Technologies Used

Flask: Backend framework for building the web application.

SqlAlchemy: ORM(Object-Relational-Mapping) tool for database interaction

SQLite: Database management system for storing application data.

Html/CSS/Bootstrap: frontend technologies for user interface design and interactivity.

Flask-login: Extension for managing user sessions and authentication

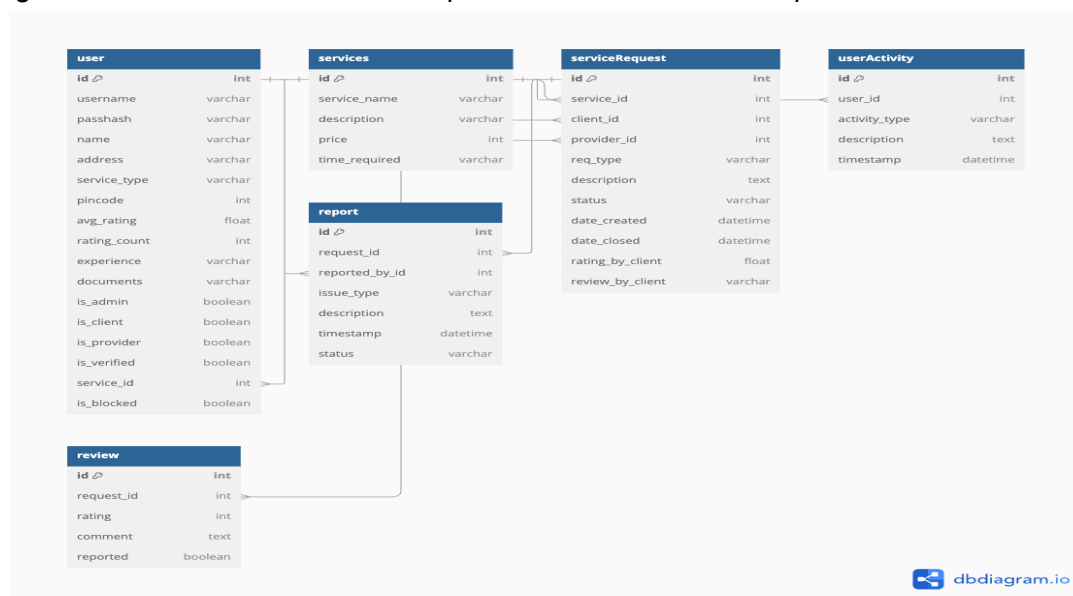
Datetime: Python library for handling date and time operations.

Jinja2: Template engine for rendering dynamic html content

Werkzeug: Utility for securely managing passwords and authentication

DB Schema Design

The database consists of relationships where users (customers or professionals) have multiple service requests, each linked to a service. Service professionals specialize in one service and can receive multiple reviews. Admin manages both services and professionals, approving or blocking them. Customers can submit reports, and each service request can have one review.




Controller that were used (Routes)

```
@app.route('/')
@app.route('/login')
@app.route('/login', methods=['POST'])
@app.route('/logout')
@app.route('/profile')
@app.route('/profile', methods=['POST'])
@app.route('/professional_register')
@app.route('/professional_register', methods=['POST'])
@app.route('/customer_register')
@app.route('/customer_register', methods=['POST'])
@app.route('/admin')
@app.route('/admin/search')
@app.route('/admin/summary')
@app.route('/admin/customers')
@app.route('/admin/professionals')
@app.route('/admin/users/<int:id>/toggle_block')
@app.route('/admin/toggle-block/<int:user_id>')
@app.route('/services/add')
@app.route('/services/add', methods=['POST'])
@app.route('/services/<int:id>/')
@app.route('/services/<int:id>/edit')
@app.route('/services/<int:id>/edit', methods=['POST'])
@app.route('/services/<int:id>/delete')
@app.route('/services/<int:id>/delete', methods=['POST'])
@app.route('/professionals/<int:id>/verify')
@app.route('/professionals/<int:id>/verify', methods=['POST'])
@app.route('/professionals/<int:id>/delete')
@app.route('/professionals/<int:id>/delete', methods=['POST'])
@app.route('/professional/dashboard')
@app.route('/professional/search')
@app.route('/professional/summary')
@app.route('/professional/request/<int:id>', methods=['POST'])
@app.route('/professional/request/<int:id>/complete', methods=['POST'])
@app.route('/professional/request/<int:request_id>/update-status', methods=['POST'])
@app.route('/professional/request/<int:request_id>/report', methods=['POST'])
@app.route('/customer/dashboard')
@app.route('/customer/search')
@app.route('/customer/service/request/<int:service_id>', methods=['POST'])
@app.route('/customer/request/<int:request_id>/close', methods=['POST'])
@app.route('/customer/request/<int:request_id>/rate', methods=['POST'])
@app.route('/customer/review/<int:review_id>/report', methods=['POST'])
@app.route('/requests/<int:id>')
@app.route('/requests/<int:id>/assign', methods=['POST'])
@app.route('/requests/<int:id>/update-status', methods=['POST'])
```

Github Link

<https://github.com/mAmanullah7/HouseHelp-Hub>

Project Demonstration Video

 Househelp Hub.mp4

https://drive.google.com/file/d/1Q87OPavarta1MrdG8Q8Z3Ck21-RIF6Do/view?usp=drive_link