

MAD1 Project - Household Services Application

Author:

- Name: Sourav Debnath
- Roll No: 23f1001907
- Email: 23f1001907@ds.study.iitm.ac.in
- Description: Third-year B.Tech student with a passion for problem-solving.

Project Overview:

A multi-user platform with roles for admins, service professionals, and customers, providing comprehensive home services.

Technologies:

- **Bootstrap:** Responsive front-end design
- **Chart.js:** Data visualizations
- **Flask:** Backend framework
- **Jinja2:** Dynamic HTML rendering
- **SQLite:** Lightweight database
- **SQLAlchemy:** ORM for database queries

Database Schema:

- **UserQuery:** Stores customer queries with fields for email, subject, message, date, sender role, etc.
- **ServiceProfessional:** Details about service providers, e.g., name, service type, verification status.
- **Customer:** Customer data with fields for login credentials, contact info, and admin access.
- **Service:** Available services with price, duration, and provider details.
- **ServiceRequest:** Tracks service requests, linking customers and professionals, with payment and status details.
- **ServiceReview:** Customer feedback on services with ratings and comments.

Key API Routes:

- ❖ **Role Selection (/):** Landing page for role selection.
- ❖ **Login (/login):** Authenticates user and redirects based on role.
- ❖ **Register (/register):** Role-based registration and redirection.
- ❖ **Admin Dashboard (/admin_dashboard):** Displays statistics overview.
- ❖ **View Customers (/customers):** Lists all customers for admin.

- ❖ **Service Professional Dashboard (/service_professional_dashboard):** Status dashboard for service professionals.
- ❖ **Add Service (/add_service):** Enables professionals to add services.
- ❖ **Request a Service (/request_service/<id>):** Customer service request.
- ❖ **Complete Payment (/complete_payment/<id>):** Finalizes payment and enables customer ratings.
- ❖ **Logout (/logout):** Logs out and redirects to the role selection page.

Project Architecture:

- **Folder Structure:** Project located in the 'IITM_MAD1' folder, with HTML files in the 'Templates' folder and a virtual environment included.
- **Database:** users.sqlite3
- **Models:** Defined in models.py
- **Routes:** Defined in routes.py
- **Initialization:** extensions.py (SQLAlchemy initialization)
- **Controllers:** __init__.py (application functionalities)

Core Features:

- **Role Management:** Admin, customer, and professional roles.
- **Authentication:** Secure login and logout.
- **Account Management:** Profile updates and restricted access for blocked users.
- **Service Management:** Add, edit, and manage services.
- **Request Management:** Service request tracking with price negotiation.
- **Notification System:** Status updates and notifications.
- **Customer Services:** Service browsing, request management, and payment.
- **Admin Controls:** User and service management dashboard.
- **Profile Management:** Comprehensive service provider profiles.
- **Statistics:** Analytics for top customers and professionals.

Video Link :

<https://drive.google.com/file/d/13LnL7MEsZDguj7POdGCaPgpPoLgI3s1O/view?usp=sharing>