

Spidey Services - Household Service Web Application

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1. Introduction

Spidey Services is a household service web application that connects customers with professionals offering various services such as plumbing, electrical work, cleaning, and more. Built using **Vue.js** for the frontend and **Flask** for the backend, the platform ensures smooth booking, management, and administration of services. It also includes an admin panel for approving professionals and assigning them to customer requests.

2. Tech Stack

- **Frontend:** Vue.js (JavaScript framework for UI)
 - **Backend:** Flask (Python framework for APIs)
 - **Database:** SQLite (Managed with SQLAlchemy ORM)
 - **Task Processing :** Celery for background tasks
 - **Styling:** Bootstrap for responsive UI
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3. Project Structure

The project is divided into **frontend** and **backend** sections to ensure maintainability and scalability.

Backend (Flask)

```
backend/
| — app.py          # Main Flask app file, initializes API routes
| — config.py       # Configuration settings (database, environment variables)
| — database.py     # Database initialization and connection setup
| — models.py       # Defines database models (User, Professional, Service, Booking,
etc.)
| — resources.py    # API resources for handling requests
| — routes.py       # Defines Flask routes for user authentication, services, and admin actions
| — requirements.txt # Dependencies required for the backend
| — instance/
|   | — database.sqlite3 # SQLite database file
```

Frontend (Vue.js)

```
frontend/
|
| — index.html      # Main HTML file
| — static/
|   | — components/ # Reusable Vue components (Navbar, ServiceCard, etc.)
|
```

4. Features Overview

Customer Features:

- Register & Login
- Browse and book services (e.g., plumbing, electrical work)
- View booking history
- Rate and review professionals

Professional Features:

- Register & Login
- Create and manage service listings
- View assigned service requests
- Accept or decline service requests

Admin Features:

- Approve or reject professional registrations
 - Assign professionals to customer requests
 - View platform analytics (total users, bookings, service demand)
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5. Implementation Details

5.1 Backend Development (Flask)

- **Framework:** Flask is used to create RESTful APIs.
- **Database Management:** SQLAlchemy ORM is used to manage the SQLite database.
- **Authentication:** JWT-based authentication for users, professionals, and admins.

Frontend Development (Vue.js)

- **Component-Based UI:** The frontend is structured using reusable components.
 - **Routing:** Vue Router handles page navigation.
 - **State Management:** Vuex (if used) manages user authentication and bookings.
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6. Conclusion

Spidey Services is an innovative solution for connecting customers with professionals for household services. With Vue.js and Flask, the platform ensures a smooth user experience and efficient service management. Future enhancements like real-time chat and payment integration will further improve the platform's usability.

7. Project Demonstration Video

Video Link: https://youtu.be/JqL7_ZgOCII?si=9XWeVJIHmbd4boIe