Indian Institute of Technology, Madras

Project Report
Modern Application Development - II

Household Services Application - V2

Student Details
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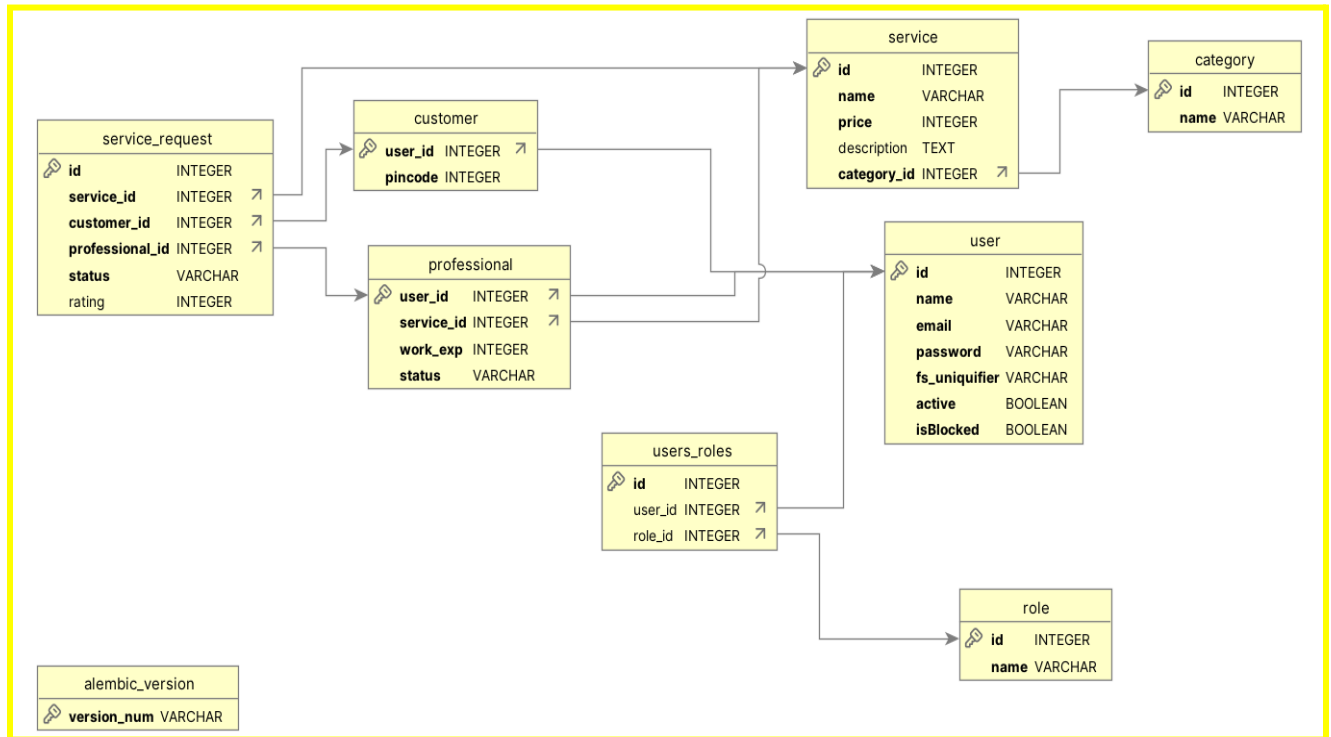- **Email:** 22f2000888@ds.study.iitm.ac.in

Project Details
- **Title:** MadyPro Household Services Application V2
- **Project Statement:** Develop a multi-user application where the customers can book services offered by service professionals. The admin manages the services, service professionals, and customers.
- **How I Approached To Project Statement:** I started this project by identifying the core models required for this application. As it is a multi-user application, I identified the necessary roles and details each role will have in common.

Frameworks and Libraries Used
- **Flask:** for creating controllers, and endpoint routing
- **VueJS CLI:** used to build user interface
- **SQLAlchemy:** for creating models, and establishing connection between models and controllers
- **Bootstrap:** to make the app aesthetically pleasing
- **SQLite:** used as a database
- **Redis:** for caching and as a message broker in Celery
- **Celery:** for async batch jobs and scheduling

Entity-Relationship Diagram:

- **Number of Entities:** 8
- **Entity Names:** user, user_roles, roles, *customer*, *professional*, *service*, *category*, and *service_request*

API Resource Endpoints

Resource	Endpoint	Method	Description
Charts	/api/chart	GET	Generates a chart for category services and returns the filename.
Categories	/api/categories	GET	Retrieves a list of categories with service counts.
	/api/categories	POST	Creates a new category (Admin only).
	/api/categories	PUT	Updates an existing category (Admin only).
	/api/categories	DELETE	Deletes a category if no

			services are associated (Admin only).
Services	/api/services	GET	Retrieves a list of services with professional counts.
	/api/services	POST	Creates a new service (Admin only).
	/api/services	PUT	Updates an existing service (Admin only).
	/api/services	DELETE	Deletes a service if no professionals are associated (Admin only).
Customers	/api/customers	GET	Retrieves a list of all customers (Admin only).
	/api/customers/current_customer	GET	Retrieves the current customer's details and service requests.
Professionals	/api/professionals	GET	Retrieves a list of all professionals (Admin only).
	/api/professionals/current_professional	GET	Retrieves the current professional's details and service requests.
Professionals by Service	/api/services/<int:service_id>/service_professionals	GET	Retrieves a list of professionals offering a specific service (Customers only).
Service Requests	/api/service_request	POST	Creates a new service request (Customers only).
Service Request Management	/api/customer/service_request	PATCH	Updates the status of a service request (Customers only)

	`/api/professional/service_request`	PATCH	Updates the status of a service request (Professionals only)
Service Request Rating	`/api/customer/service_request/rate`	PATCH	Rates a completed service request (Customers only)
User Management	`/api/user/block`	POST	Blocks a user (Admin only)
	`/api/user/unblock`	POST	Unblocks a user (Admin only)
Professional Status Management	`/api/professional/flag`	PATCH	Flags a professional without blocking them (Admin only)
	`/api/professional/activate`	PATCH	Activates a flagged professional (Admin only)

Presentation Video
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