Database Management Systems Laboratory(CS39202) : Assignment 4 Report

Project Overview

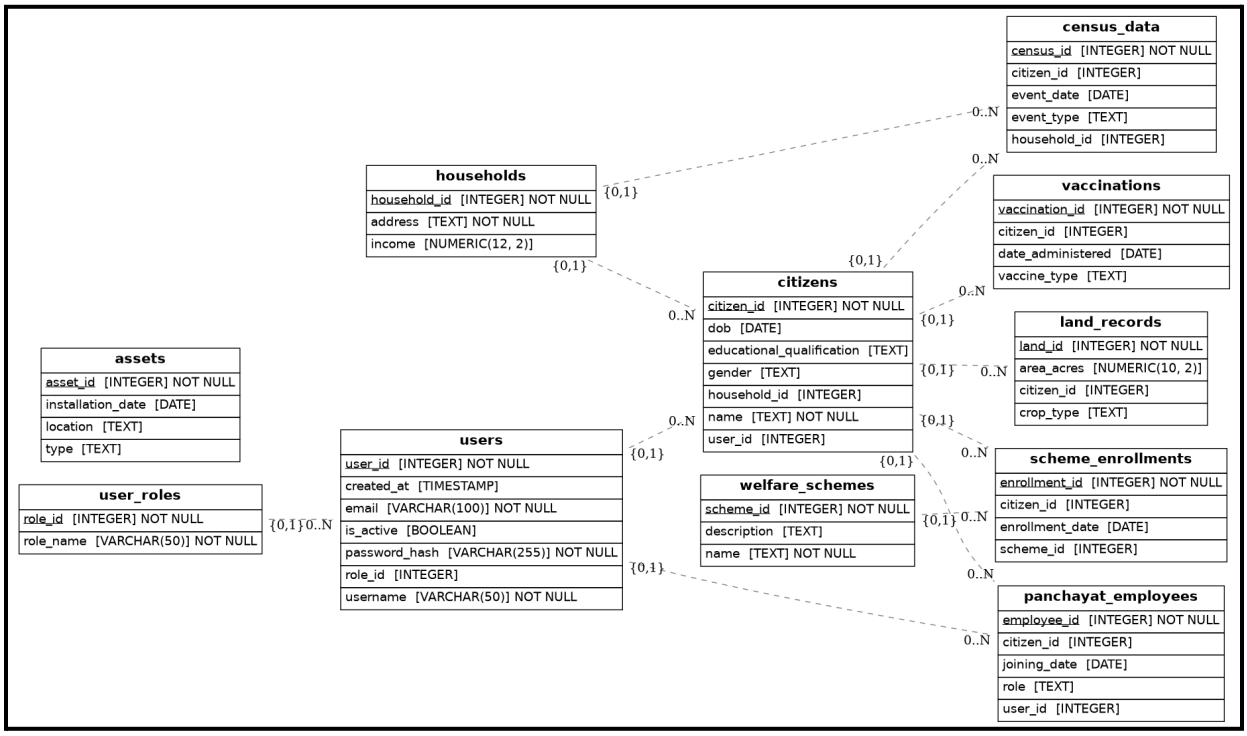
The goal of this project is to build a complete web based information system having a backend database, a connectivity server, front end scripts and finally a form based web interface. Any database server/scripting language can be used to build the system. However, the use of a database and scripts are compulsory. The information system to be built is a ***Gram Panchayat Management System***

Team Name :- Team Titan

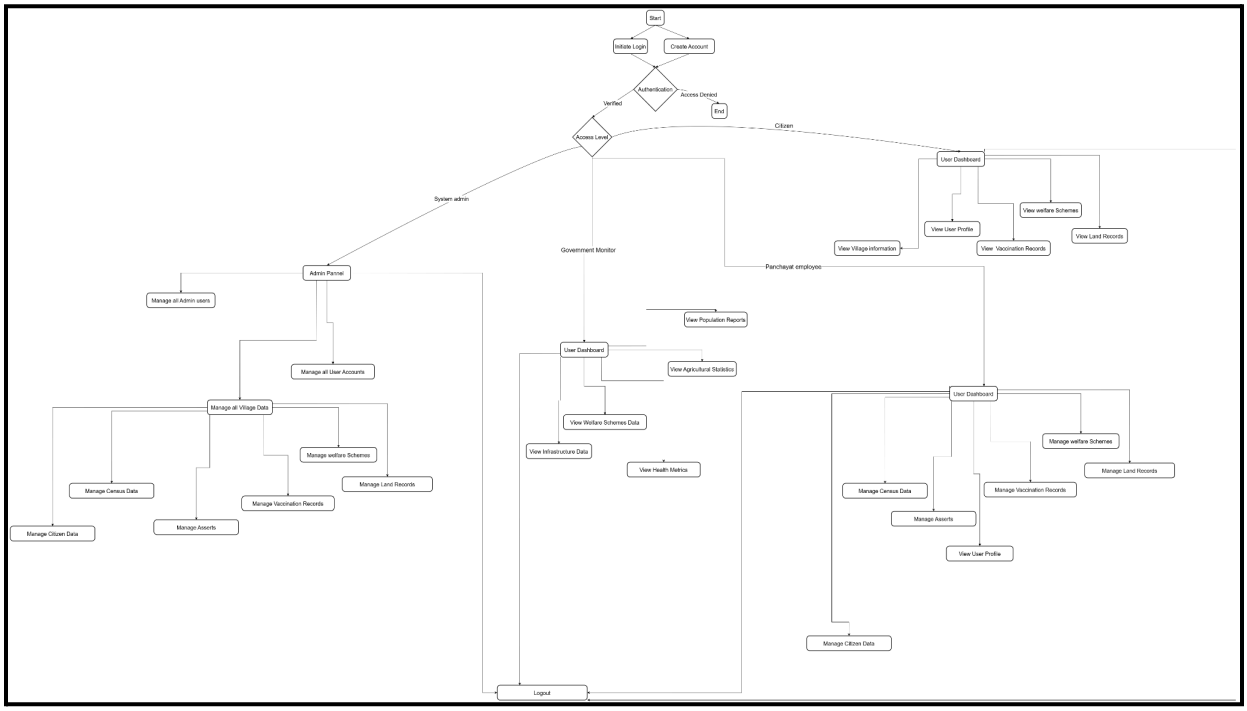
Team members

Name	Roll numbers
Sadda Suchith Reddy	22CS10063
G M M Prabhash	22CS30027
Emandi Devi Lakshman	22CS10022
Sai Deepak	22CS10066
Gedda Sai Shashank	22CS10025

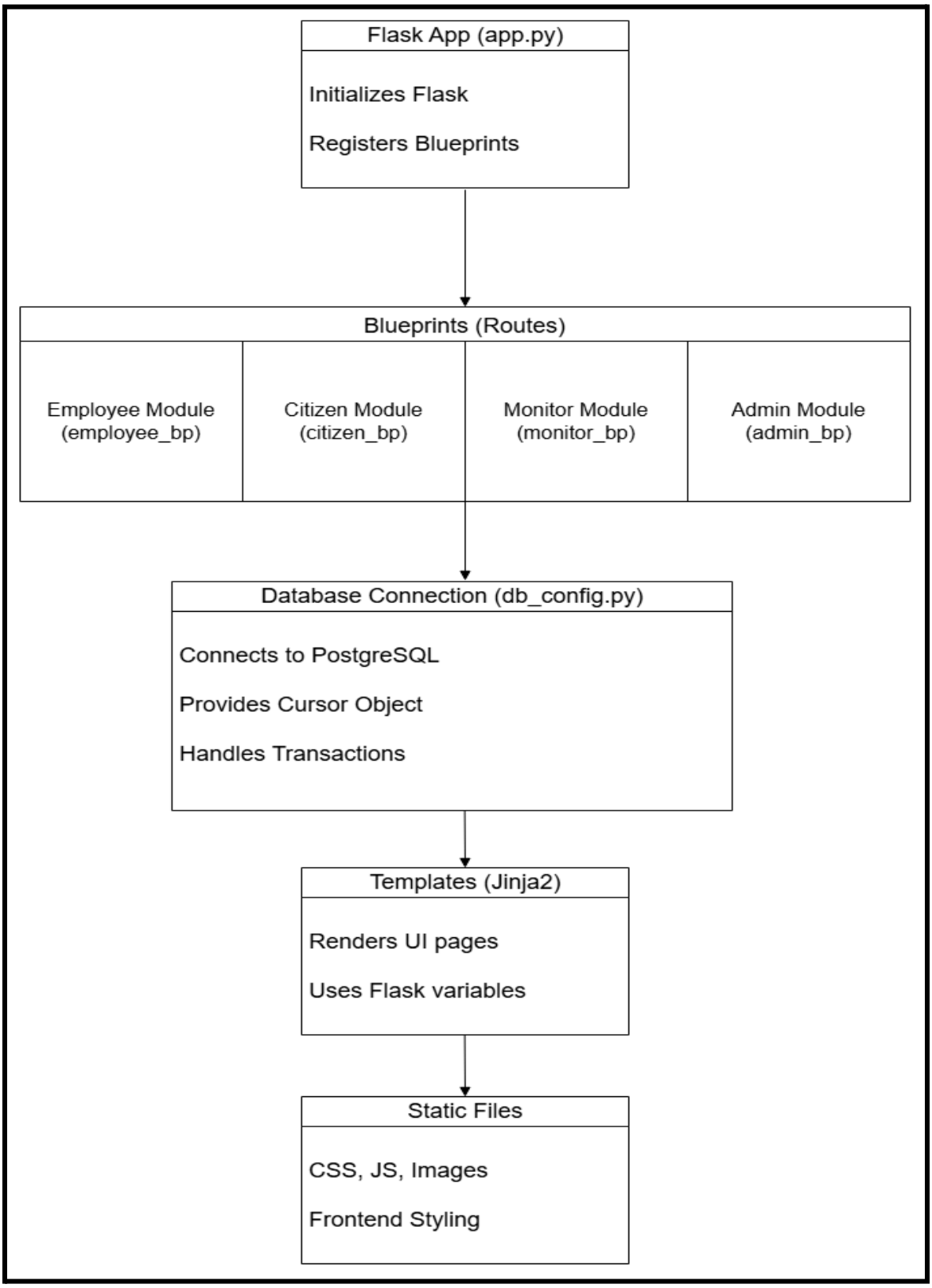
ER Diagram



Workflow diagram



Module diagram of the system



List of tools used

1. Backend Technologies

- **Flask** (Python) → Web framework for handling requests and rendering templates.
- **Werkzeug** → Security & password hashing
- **Flask-Login** → User authentication and session management.
- **Flask-WTF** → Form validation and handling.

2. Frontend Technologies

- **Jinja2** → Template engine for rendering dynamic HTML pages.
- **HTML, CSS, JavaScript** → Basic web UI and interactivity.

3. Database & Data Handling

- **PostgreSQL (PSQL)** → Database for storing user data, panchayat records, welfare schemes, etc.
- **psycopg2** → PostgreSQL adapter for Python, used to interact with the database.

4. Configuration & Environment Management

- **Python-dotenv** → For managing environment variables (config.py).
- **Config Class** → Centralized configuration management.

References

ER diagram is generated by the eralchemy2 tool
Link for the Workflow
Link for the modular diagram