CA - Prerequisites Document

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TITLE : Blog Web Application using Flask and MongoDB

INTRODUCTION

This project is a **Restaurant Ordering Web Application** built using **Flask**, a lightweight and powerful Python web framework known for its simplicity, flexibility, and ease of use in web development. The application allows users to seamlessly browse a dynamic food menu, add items to their cart, and place orders online. With built-in user authentication, customers can register, log in, and manage their order history, while administrators can control menu items and track orders efficiently.

The backend is powered by **MongoDB**, a scalable NoSQL database used to store food items, user profiles, and order details. The project follows the **MVC (Model-View-Controller)** architecture, ensuring a clean separation of business logic, user interface, and data access layers.

This project demonstrates the power of **Flask** in building full-featured web applications quickly, making it an excellent example of full-stack development using **Python, Flask, and MongoDB**. It is production-ready and can be extended into a fully operational restaurant ordering system.

SYSTEM REQUIREMENTS

1. **Hardware Requirements**
   - **Processor:** Intel Core i3 or higher
   - **RAM:** 4 GB minimum
   - **Storage:** At least 500 MB free disk space
   - **Operating System:** Windows 10/11, macOS, or Linux

2. **Software Requirements**
   - **Node.js** v18.16.1 or later (for testing or optional frontend packages)
   - **npm** v9.5.1 or later
   - **Python** v3.11.9 or later
   - **Local MongoDB Server** / Atlas
   - **VS Code** – Recommended IDE for both frontend and backend development
   - **Postman** – For API testing

TECHNOLOGY STACK :

Layer	Technology Used
Frontend	HTML, CSS (via main.css), Jinja2 (Flask Templating)
Backend	Python, Flask
Database	Local MongoDB Server
Tools	VS Code, Postman
Server	Flask Development Server
Version Control	Git and GitHub

SETUP INSTRUCTIONS :

Follow these steps to set up and run the project on your local machine:

Clone the Repository

GITHUB LINK

Create a Virtual Environment (optional but recommended)

```
python -m venv venv venv\Scripts\activate
# For Windows source venv/bin/activate #
For Linux/macOS
```

Install Required Packages

```
pip install -r requirements.txt
```

MongoDB Setup

If you're using **local MongoDB**, make sure it's running at:
`mongodb://127.0.0.1:27017` *(already set in credentials.py)*
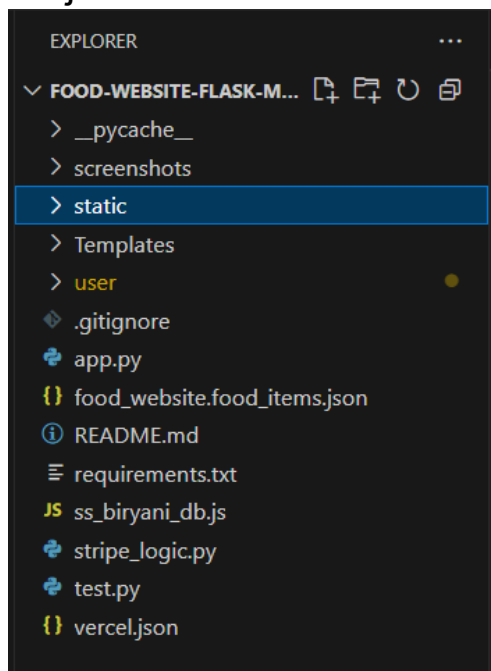**Run the Flask Application**

```
python app.py
```

Access the App
Open your browser and go to:
`http://127.0.0.1:5000/`

Project Structure :

<u>CONCLUSION</u>

This document provides the required prerequisites and detailed structure for setting up the **Flask MongoDB Blog Application**. It helps understand the project's flow and ensures proper environment setup for successful execution. The project demonstrates core web development concepts such as routing, templates, database operations (CRUD), and user authentication in a simple yet effective way.