

WebX CA Prerequisites

Title :- Good Old Friend - Book Recommendation Application

1. System Requirements: - Hardware & Software

Hardware Requirements:

- **Server/Local Machine:**
 - Processor: Minimum 2.0 GHz Dual-Core Processor
 - RAM: Minimum 4GB of RAM
 - Disk Space: At least 1GB of available disk space
 - Network: Stable internet connection for MongoDB Atlas connectivity

Software Requirements:

- **Frontend:**
 - HTML, CSS, JavaScript
 - Flask framework (for the integration with Python)
- **Backend:**
 - Python 3.x (For Flask)
 - Flask framework
 - MongoDB Atlas (for cloud-based database management)
 - Necessary Python packages (Flask, Flask-Mail, Flask-Login, Flask-WTF, Flask-SQLAlchemy, Pandas, NumPy)
- **Database:**
 - MongoDB Atlas (for cloud-based database)
- **Development Tools:**
 - Code editor: VS Code, PyCharm, Sublime Text, or any IDE of choice
 - Terminal (for command-line operations)

2. Setup Instructions

Frontend Setup (HTML, CSS, Flask)

Steps:

1. **Install Python:**Download from: <https://www.python.org/downloads/>
Verify installation: `python --version`
2. **Navigate to frontend directory:**
`cd frontend`
3. **Install Python dependencies:**
`pip install -r requirements.txt`

4. **Run the Flask development server:**
`python app.py`
5. **Frontend will be accessible via:**
`http://localhost:5000`

Backend Setup (Flask - Python)

Steps:

1. **Install Python:**Download from: <https://www.python.org/downloads/>
Verify installation: `python --version`
2. **Navigate to backend directory:**
`cd backend`
3. **Create a virtual environment:**
`python -m venv venv`
4. **Activate virtual environment:**
Windows: `venv\Scripts\activate`
5. **Install Python dependencies:**
`pip install -r requirements.txt`
6. **Configure environment variables:**
 - Create a .env file in the backend directory.
 - Add MongoDB URI and secret keys:
`MONGO_URI=mongodb+srv://<username>:<password>@cluster.mongodb.net/<your-database>`
`SECRET_KEY=your-secret-key`
7. **Start the Flask server:**
`python app.py`
8. **Backend will run on:**
`http://localhost:5000`

3. Database Setup (MongoDB Atlas)

Steps:

1. **Set up a cluster:**

- Create a new project and cluster in MongoDB Atlas.
- Choose the free-tier cluster.

2. **Configure security settings:**

- Add a database user and configure access permissions.
- Whitelist your current IP address.

3. **Create a new database:**

- Name: **bookRecommendationDB**

4. **Get the connection string:**

mongodb+srv://<username>:<password>@cluster.mongodb.net/bookRecommendationDB

Conclusion

In conclusion, the successful implementation of the Book Recommendation System relies on a well-defined set of prerequisites, including knowledge of Flask for backend development, HTML/CSS for frontend design, and MongoDB for efficient data storage. Additionally, understanding email OTP verification for secure user registration and familiarity with the overall system architecture is crucial. By meeting these prerequisites, developers can ensure a smooth and secure experience for users while delivering personalized book recommendations.