WEB X CA

PREREQUISITES - TRACKIFY

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Title : Trackify

Introduction:

Trackify is a smart and intuitive task management system designed to boost productivity by organizing and tracking daily tasks efficiently. Built using **Angular** for the frontend, **Flask** for the backend, and **MongoDB** as the database, Trackify offers a seamless user experience for individuals and teams to stay on top of their schedules and progress. With responsive design and powerful REST APIs, Trackify ensures accessibility and usability across all devices.

System Requirements

1. Hardware Requirements:

- **Processor:** Intel Core i5 / AMD Ryzen 5 or higher (dual-core, 2.0 GHz or faster)

- **RAM:** Minimum 8GB (16GB recommended)

- **Storage:** At least 1GB free space (256GB SSD recommended)

- **Network:** Stable internet connection (especially for MongoDB Atlas users)

2. Software Requirements:

- **Operating System:** Windows 10/11, macOS 10.15+, or Ubuntu 20.04+

- **Code Editor:** Visual Studio Code or compatible IDE

- **Version Control:** Git 2.25+

Technology Stack

Layer	Technology
Frontend	Angular (v14 or higher)
Backend	Flask (Python 3.8+)
Database	MongoDB (Atlas or local)
Styling	SCSS / Bootstrap (optional)
APIs	RESTful Flask APIs

Setup Instructions :

- **Node.js** and **Angular CLI :** To set up Trackify, first ensure that Node.js and Angular CLI are installed. Visit the official Node.js website and download the LTS version suitable for your operating system. After installation, verify it using node -v and npm -v in your terminal. Once Node.js is installed, open a terminal or command prompt and install Angular CLI globally by running **npm install -g @angular/cli**, then confirm the installation using ng version

- **Python 3.8+ :** Next, install Python 3.8 or higher by visiting the official Python website. Download the appropriate installer for your OS and during installation (especially on Windows), ensure you check the option "Add Python to PATH." After installation, verify it by running python --version and pip --version in the

terminal. Optionally, for better environment management, you can create a virtual environment using python -m venv venv' and activate it with venv\Scripts\activate on Windows or source venv/bin/activate on macOS/Linux.

- **MongoDB** (Local or Cloud - **MongoDB Atlas**) : Finally, set up **MongoDB** either locally or via **MongoDB Atlas**. For a local setup, download MongoDB Community Edition from the [MongoDB website](#) and follow the platform-specific installation instructions. To use MongoDB Atlas, go to https://www.mongodb.com/cloud/atlas, create a free cluster, set up a database, and obtain the connection string for use in your Flask backend.

Backend Setup :

1. Navigate to backend folder:

   cd project

2. (Optional) Create a virtual environment:

   python -m venv venv

   venv\Scripts\activate   # For Windows

3. Install dependencies:

   pip install -r requirements.txt
4. Start the Flask server:

   cd api
   python app.py

Backend will run at: http://localhost:5000

Frontend Setup

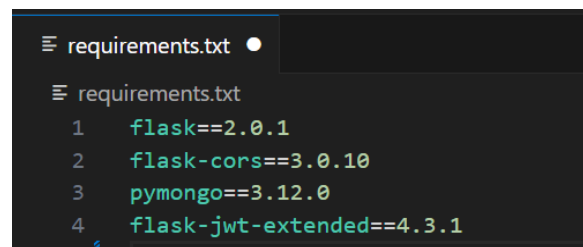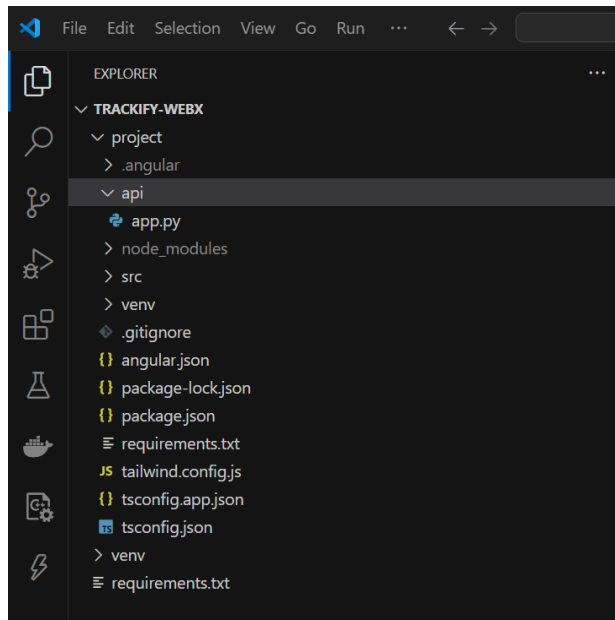1. Navigate to frontend folder:

   cd project

2. Install dependencies:

   npm install

3. Start Angular development server:

   ng serve

Frontend will run at: http://localhost:4200

Project Structure

Features Overview

- ● Task Management: Create, update, delete, and organize tasks.

- ● Progress Tracking: Visual indicators for task completion.

- ● Responsive Design: Mobile-first UI design using SCSS/Bootstrap.

- ● REST APIs: Communication between Angular frontend and Flask backend.

Conclusion:

By completing the above installations and setup, your system will be fully equipped to run Trackify efficiently. Ensuring that Node.js with Angular CLI, Python with necessary dependencies, and MongoDB (either locally or via Atlas) are correctly configured is crucial for seamless integration between the frontend, backend, and database. Once these prerequisites are in place, you'll be ready to test the Trackify task management system with minimal hurdles.