

## **CA - Prerequisites Document**

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### **TITLE:**

**TaskX** – TaskX is a modern, full-stack task management application built with React (TypeScript) for the frontend and Flask for the backend.

### **INTRODUCTION**

TaskX is a modern, full-stack task management application built with React (TypeScript) for the frontend and Flask for the backend. It helps users organize their tasks, track goals, and boost productivity with features like Pomodoro timing, task categorization

### **SYSTEM REQUIREMENTS**

#### **1. Hardware Requirements:**

- Processor: Intel Core i5 or higher
- RAM: Minimum 8GB (Recommended: 16GB for optimal performance)
- Storage: At least 10GB free disk space
- Operating System: Windows 10/11, macOS, or Linux

#### **2. Software Requirements**

- Node.js (v18.16.1 or later) – Required for running Angular frontend
- npm (v9.5.1 or later) – For managing Angular dependencies
- Python (3.11.9 or later) – Required for Flask backend
- MongoDB Atlas – Cloud-based NoSQL database
- VS Code – Recommended IDE
- Postman – For API testing and verification

## **TECHNOLOGY STACK**

### **1. Frontend**

- React (UI Library)
- TypeScript (Typed JavaScript)
- Tailwind CSS (for styling and responsive UI)

### **2. Backend**

- Flask (Python web framework)
- Flask-CORS (Handles cross-origin requests)
- PyMongo (MongoDB connector)

### **3. Database**

- MongoDB Atlas (Cloud-based NoSQL database for storing users and tasks)

## **SETUP INSTRUCTIONS**

### **1. Install Node.js and NPM**

Download and install Node.js from [Node.js Official Website](https://nodejs.org/en/).

Verify installation:

```
node -v
```

```
npm -v
```

### **2. Install Python and Flask**

Download and install Python from the [Python Official Website](https://www.python.org/).

Verify installation:

```
python --version
```

```
pip --version
```

- Install dependencies:

```
pip install flask flask-cors pymongo
```

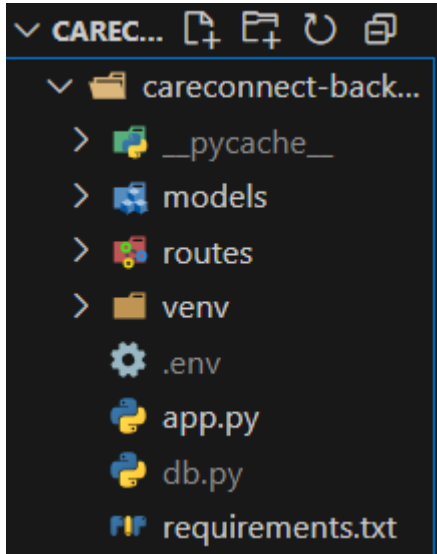
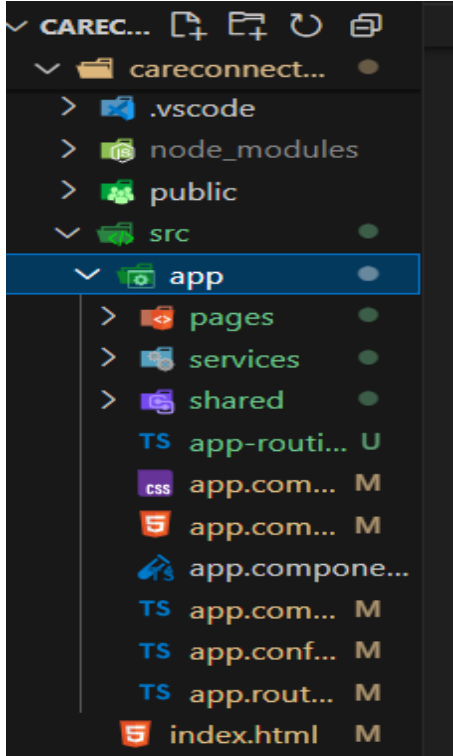
### **3. Setup MongoDB**

Use **MongoDB Atlas** for cloud storage or install **MongoDB locally** from [MongoDB Official Website](https://www.mongodb.com/).

Setup MongoDB Atlas

- Create a cluster at <https://www.mongodb.com/>
- Create collections: users, tasks
- Connect using connection string in Flask

## PROJECT STRUCTURE

Backend	Frontend
	

## CONCLUSION

This document provides the prerequisites for setting up the TaskX project including system setup, technology stack, and dependencies. Following the instructions ensures a smooth environment for development and demonstration of the TaskX application.