WebX Lab CA - Prerequisites Document

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College Event Organizer

Introduction

The **College Event Organizer** project is a Fullstack **AI Career Recommendation System** web application built using:

- **React**, **Tailwind CSS**, and **TypeScript** for the frontend
- **Node.js** and **Express** for the backend
- **MongoDB Atlas** as the database

This document outlines the prerequisites and setup instructions to successfully run the project.

System Requirements

1. Hardware Requirements

- **Processor:** Intel Core i5 or higher
- **RAM:** Minimum 8GB (Recommended: 16GB for smooth 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 the React frontend
- **npm** (v9.5.1 or later) – For managing frontend dependencies
- **Python** (3.11.9 or later) – Required for Flask backend
- **MongoDB Atlas** – Cloud-based NoSQL database
- **Visual Studio Code** – Recommended IDE for both frontend and backend development
- **Postman** – For API testing

Technology Stack

Frontend

- React with TypeScript
- React Router for navigation
- React Hook Form for form handling
- Tailwind CSS for styling
- Shadcn UI components
- Lucide React for icons
- React Query for data fetching

Backend

- Node.js with Express
- MongoDB for database
- JWT for authentication
- Google Generative AI integration for AI-powered features

Database

- **MongoDB Atlas** (or **MongoDB Compass**)
    - Cloud-based NoSQL database for storing product details

Setup Instructions

Prerequisites

Ensure the following are installed on your system:

- Node.js (v14 or higher)
- MongoDB
- Google Generative AI API key (for AI features)

Installation

1. Clone the Repository

```
git clone <repository-url>
cd spit_final
```

2. Install Frontend Dependencies

```
npm install
```

3. Install Backend Dependencies

```
cd backend
npm install
```

Environment Setup

1. Create `.env` File in the Root Directory

Create a file named `.env` and add the following:

```
VITE_API_URL=http://localhost:5000
VITE_GEMINI_API_KEY=your_gemini_api_key
```

2. Create `.env` File in the Backend Directory

Inside the `backend` folder, create a `.env` file with the following:

```
PORT=5000
MONGODB_URI=your_mongodb_connection_string
JWT_SECRET=your_jwt_secret
```

Running the Application

1. Start the Backend Server

```
cd backend
npm start
```

2. Start the Frontend Development Server

From the root directory:

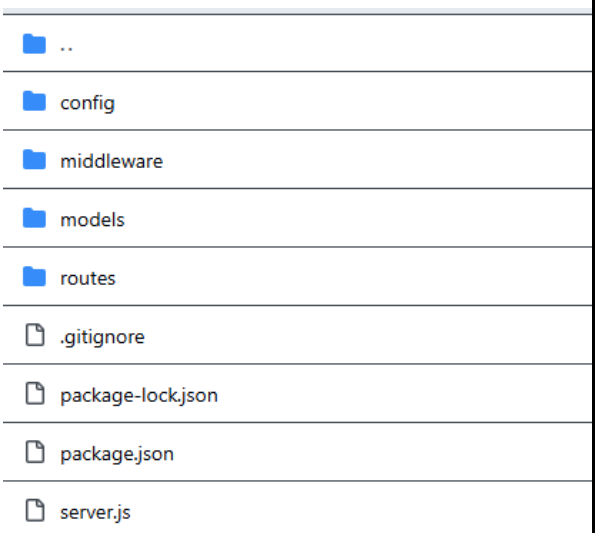
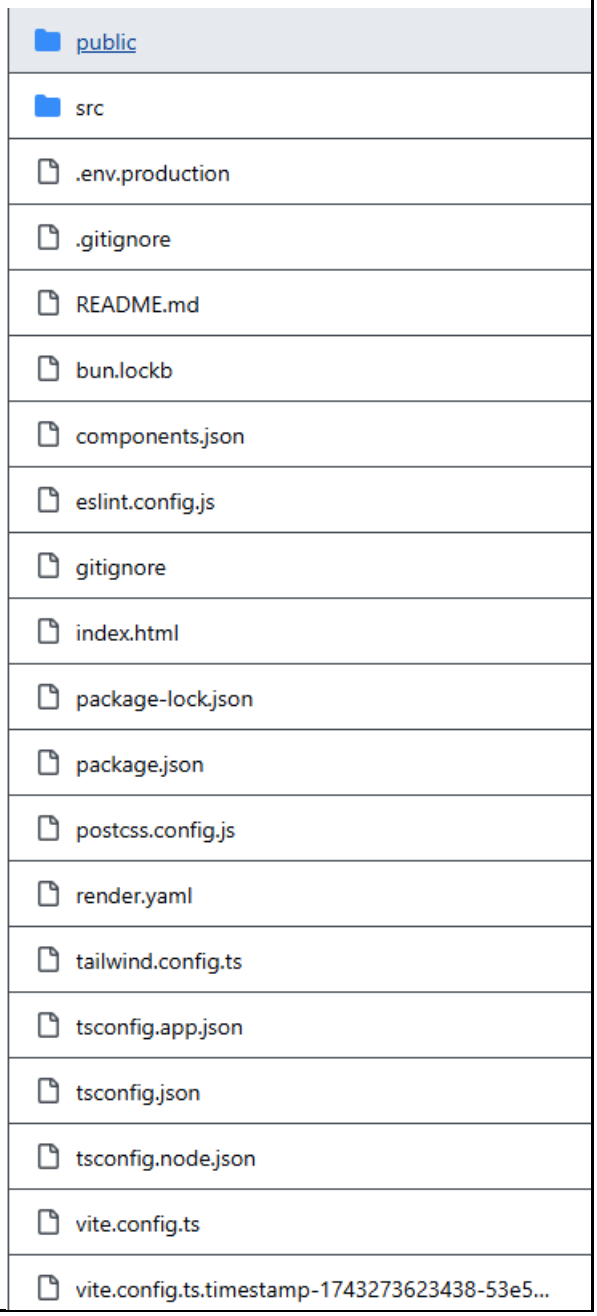
```
npm run dev
```

3. Access the Application

Open your browser and navigate to:

```
http://localhost:5173
```

PROJECT STRUCTURE

Backend	Frontend
	

CONCLUSION

This document provides the necessary prerequisites for setting up the **College Event organizer** project, including hardware/software requirements. Ensuring all dependencies and configurations are correctly set up will help in running the project efficiently.