**Psych Mission Simulator - Installation Guide**

**Overview**

**This document provides instructions to set up, install, and run the Psyche Mission Simulator application. Follow the steps below to ensure a smooth setup process.**

**System Requirements**

**Before proceeding, verify that your system meets the following requirements:**

* **Operating System: Windows 10/11, macOS, or Linux**
* **Node.js: v16.x or higher (for frontend)**
* **npm: v8.x or higher**
* **.NET SDK: .NET 6.0 or higher**
* **Postgre : v13 or higher**
* **Other software: Git, Docker (optional for containerization)**

**1. Clone the Repository**

**Start by cloning the project from the repository:**

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**git clone https://github.com/username/project-name.git**

**cd project-name**

**2. Install Dependencies**

**Backend Installation**

**The backend for this project is built using ASP.NET Core. Follow these steps to install it:**

1. **Install .NET SDK:**
   * **Download and install the .NET SDK from** [**Microsoft’s .NET Download page**](https://dotnet.microsoft.com/download)**.**
2. **Navigate to the backend directory:**

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**cd backend**

1. **Restore dependencies:**

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**dotnet restore**

**Frontend Installation**

**The frontend uses HTML5, CSS3, JavaScript, React, and Vite for a fast development setup. Follow these steps to set up:**

1. **Ensure Node.js and npm are installed:**
   * **Download from** [**Node.js website**](https://nodejs.org/)**.**
   * **Verify installation with:**

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**node -v**

**npm -v**

1. **Navigate to the frontend directory:**

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**cd ../frontend**

1. **Install the necessary dependencies:**

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**npm install**

**3. Configure Environment Variables**

**Backend Configuration**

1. **In the backend directory, create an environment file (appsettings.Development. ).**
2. **Add your database configuration:**

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**{**

**"ConnectionStrings": {**

**"DefaultConnection": "Host=localhost;Database=[database\_name];Username=[username];Password=[password]"**

**},**

**"JwtSettings": {**

**"Secret": "[Your secret key]"**

**}**

**}**

**Frontend Configuration**

1. **In the frontend directory, create a .env file from the example provided:**

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**cp .env.example .env**

1. **Update the necessary environment variables:**

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**VITE\_API\_URL=http://localhost:[backend\_port]/api**

**4. Set Up the Database**

**The database for this project is Postgre . Ensure Postgre is installed and running.**

1. **Download and install Postgre :**
   * **Download from** [**Postgre website**](https://www.postgresql.org/download/)**.**
2. **Create a database:**
   * **Start the Postgre shell and enter:**

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**CREATE DATABASE [database\_name];**

1. **Apply database migrations (if applicable):**

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**cd backend**

**dotnet ef database update**

**5. Running the Application**

**Start the Backend**

**To start the ASP.NET Core backend server:**

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**cd backend**

**dotnet run**

**The backend server will be running on http://localhost:[port].**

**Start the Frontend**

**To run the frontend React app:**

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**cd frontend**

**npm run dev**

**The frontend app will be available at http://localhost:3000.**

**6. Testing**

**Open a browser and navigate to the frontend URL to ensure both the frontend and backend are properly connected.**

**7. Building for Production**

**Frontend Build**

**When ready to deploy the frontend, create a production build:**

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**cd frontend**

**npm run build**

**Backend Start for Production**

**To start the backend in production mode:**

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**cd backend**

**dotnet publish --configuration Release**

**8. Troubleshooting**

**Common Issues:**

* **Backend not connecting to the database: Ensure database credentials are correct in the appsettings.Development. .**
* **Frontend not loading API data: Verify VITE\_API\_URL is correctly pointing to the backend URL.**

**9. Additional Resources**

**For further information, visit:**

* [**React Documentation**](https://react.dev/)
* [**.NET Documentation**](https://docs.microsoft.com/en-us/dotnet/)
* [**Postgre Documentation**](https://www.postgresql.org/docs/)