# DestinEase Deployment Manual

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## Introduction

The DestinEase application is a modern web platform designed to help users discover and plan their perfect travel destinations.   
It combines a React-based frontend with a robust Node.js/Express backend to deliver personalized travel recommendations, real-time weather integration, and flight search functionality.

Key Features:

* - Personalized travel recommendations based on user preferences  
  - Real-time weather data integration  
  - Flight search and pricing information  
  - Secure user authentication system  
  - Interactive destination cards with detailed insights  
  - Smart filtering and sorting options

## System Requirements

Ensure your system meets these requirements:

### Hardware Requirements:

- Processor: 1.8 GHz or faster  
- RAM: 4 GB minimum (8 GB recommended)  
- Storage: 1 GB of available space  
- Internet Connection: Active

### Software Requirements:

- Node.js: Version 14.0.0 or higher   
- npm: Version 6.0.0 or higher   
- Git: Installed   
- Web Browser: Modern browsers like Chrome, Firefox, Safari, or Edge   
- Code Editor: Visual Studio Code (recommended)

## Deployment Procedures

Follow these steps to set up your development environment and install necessary dependencies.

### Frontend Dependencies:

1. Install core React packages:  
 npm install react react-dom react-router-dom  
2. Install UI components and utilities:  
 npm install @lucide-react  
 npm install recharts  
 npm install tailwindcss postcss autoprefixer  
3. Install network and state management libraries:  
 npm install axios cors

### Backend Dependencies:

1. Install server framework and middleware:  
 npm install express body-parser cors  
2. Install authentication packages:  
 npm install jsonwebtoken bcryptjs  
3. Install additional utilities:  
 npm install axios dotenv

## Cloning Git Repository

To set up the project repository:  
  
1. Open your terminal/command prompt.   
2. Clone the repository:  
 git clone https://github.com/htmw/2024F-Visionary-Techs  
 cd travel-recommendations-app  
3. Install project dependencies:  
 npm install  
4. Verify the project structure:  
 - Ensure all React components are in src/components.  
 - Check for configuration files: package.json, tailwind.config.js, server.js  
 - Confirm the presence of required modules in node\_modules.

## Firebase Integration

The application can be configured to use Firebase for authentication. Follow these steps:  
  
1. Firebase Project Setup:   
 - Visit Firebase Console.  
 - Create a new project.  
 - Enable Authentication services.   
  
2. Configure Firebase in the Application:  
 Update the Firebase configuration in your code:  
  
 const firebaseConfig = {  
 apiKey: "your-api-key",  
 authDomain: "your-domain.firebaseapp.com",  
 projectId: "your-project-id",  
 storageBucket: "your-bucket.appspot.com",  
 messagingSenderId: "your-sender-id",  
 appId: "your-app-id"  
 };  
  
3. Environment Configuration:   
 - Create a .env file in the root directory.   
 - Add Firebase credentials.   
 - Update authentication providers in the backend.

## Starting the Server

Follow these steps to start the servers:  
  
1. Start the Backend Server:  
 cd backend  
 node server.js  
 The backend server will run on port 5980 by default.  
  
2. Start the Frontend Development Server:  
 cd frontend  
 npm start  
 The frontend server will be accessible at http://localhost:3000.  
  
3. Verify Deployment:  
 - Backend Health Check: Visit http://localhost:5980/api/health.  
 - Frontend Access: Go to http://localhost:3000.  
 - Test user authentication.  
 - Verify API connections (Weather API, Flight API, User Preferences).  
  
4. Test the Application:  
 - Create a new user account.  
 - Set travel preferences.  
 - View personalized recommendations.  
 - Test flight search functionality.  
 - Confirm weather data display.