Technical Documentation

Project Title: Development of a Mobile App for In-Depth Roadmap Recommendations in Learning Technology (Project ilearn)

Overview

This document provides the technical instructions required to set up, install, and run the mobile application for in-depth roadmap recommendations in learning technology. The steps outlined below assume the user has the necessary source code and basic familiarity with software development.

Prerequisites

Before setting up the project, ensure that the following software and tools are installed on your development machine:

1. Flutter SDK

- **Download**: Flutter SDK

- **Installation**:

  - Follow the installation instructions provided on the Flutter official website for your specific operating system (Windows, macOS, or Linux).

  - Ensure that the Flutter path is added to your system's environment variables.

2. Dart SDK

- Dart is bundled with the Flutter SDK, so you don't need to install it separately.

- **Verify Installation**:

  - Open your terminal or command prompt and run flutter doctor.

  - This command checks your environment and displays a report of the status of your Flutter installation.

  - Ensure that all checks are passed before proceeding.

3. Android Studio (or any other preferred IDE)

- **Download**: [Android Studio](#)

- **Installation**:

  - Follow the instructions based on your operating system.

  - Ensure that you install the Flutter and Dart plugins in Android Studio.

  - You can also use other IDEs like Visual Studio Code with the appropriate plugins installed.

4. Android SDK

- Android Studio comes bundled with the Android SDK, which is required to build and run the app on an Android emulator or device.

- Ensure that you have set up an Android Virtual Device (AVD) in Android Studio for testing.

5. Xcode (For macOS users)

- If you wish to build and run the app on iOS devices, Xcode must be installed.

- **Download**: [Xcode](#)

- **Installation**:

  - Follow the standard installation process for Xcode on macOS.

  - Ensure that you set up an iOS simulator for testing.

6. Git

- **Download**: [Git](#)

- **Installation**:

  - Install Git according to your operating system.

  - Use Git to clone the repository or manage version control for the project.

Setup Instructions

1. Clone the Repository

- Open a terminal or command prompt.

- Clone the repository using Git:

git clone https://github.com/taotechs/project_ilearn.git

- Navigate into the project directory:

cd ilearn

2. Install Dependencies

- Ensure you are in the root directory of the project.

- Run the following command to install all the required dependencies listed in the pubspec.yaml file:

flutter pub get

3. Run the App on an Emulator or Physical Device

- Ensure that your Android emulator or iOS simulator is running, or connect a physical device via USB.

- Run the following command to launch the app:

flutter run

- The app should build and run on the connected device or emulator.

4. Configure App Settings

- The app includes a Preferences screen where users can customize their experience.

- Navigate to the Preferences screen via the home screen to adjust the settings according to user preferences.

5. Building the APK (Android)

- To build the APK for distribution, run the following command:

flutter build apk --release

- The APK will be generated in the build/app/outputs/flutter-apk directory.

6. Building for iOS (For macOS Users)

- To build for iOS, ensure that you are using a macOS system with Xcode installed.

- Run the following command:

flutter build ios --release

- Open the Xcode workspace (ios/Runner.xcworkspace) in Xcode and configure your signing and deployment settings.

Running Tests

- If unit tests or widget tests are included in the project, you can run them using:

flutter test

- Ensure that all tests pass before deploying the application.

Troubleshooting

- If you encounter any issues during setup or running the app, refer to the [Flutter documentation](#) for troubleshooting guidance.

- Use flutter doctor to diagnose any issues with your environment setup.

Conclusion

Following these steps, you should be able to set up, install, and run the mobile app successfully. This documentation ensures that developers or users with access to the source code can get the app up and running with minimal difficulty. For any further assistance, refer to the official documentation or contact the development team.