

# Environment Setup for React Native

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# Introduction

## What is React Native?

- A framework for building mobile apps using JavaScript and React.
- Enables you to write cross-platform apps for iOS and Android.

# Prerequisites

## Hardware Requirements

- Windows
- Minimum 8 GB RAM (recommended)
- Free disk space (~20 GB)

## Software Requirements

- Node.js
- A package manager (npm or yarn)
- Git (clone and managing code repose)

# Steps



- Install Node.js and npm
- Install React Native CLI
- Install Android Studio
- Install Visual Studio Code
- Install Git CLI





# Install Node.js



## Why Node.js?

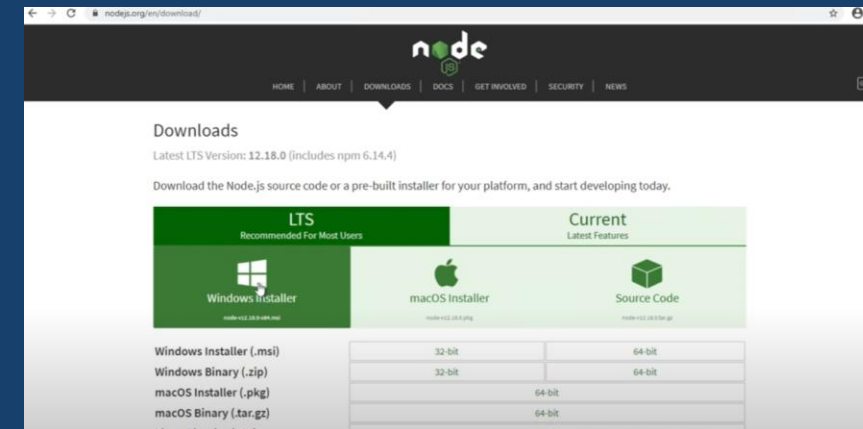
- React Native requires Node.js for running JavaScript code and managing dependencies.

## Installation Steps

- Download the latest LTS version of Node.js
- Run the installer and follow the prompts to complete the installation.

## Verify installation

- Open Command prompt and type  
`node -v`



# Install React Native CLI

## What is React Native CLI?

- The React Native CLI is a command-line interface for managing React Native projects.
- With it, we can create new projects and build them on devices or emulators.

## Installation Steps

- Open Command Prompt as Administrator.
- Run the following command:

```
npm install -g react-native-cli
```

## Verify installation

- Open Command prompt and type  
`react-native --version`



# Install Android Studio

## Why Android Studio?

- Android Studio is required for building and running Android apps.

## Installation Steps

- Download and install Android Studio.

## Configure Android SDK

- Open Android Studio > SDK Manager
  - Install required SDKs and tools:
    - Android 11 (API Level 30)
    - Android SDK Build-Tools
    - Android Emulator
- Set Environment Variables
  - Variable Name: ANDROID\_HOME
  - Variable Value: Path to Android SDK  
(e.g., C:\Users\YourUser\AppData\Local\Android\Sdk)

Add the following paths to the Path variable:

C:\Users\YourUser\AppData\Local\Android\Sdk\platform-tools

C:\Users\YourUser\AppData\Local\Android\Sdk\tools





# Set up Android Virtual Device (AVD)

- Open Android Studio and navigate to Tools > AVD Manager.
  - Create a new virtual device (e.g., Pixel 4) and follow the prompts to download an image.



# Start New Project



## 1. Run the following command to create new project:

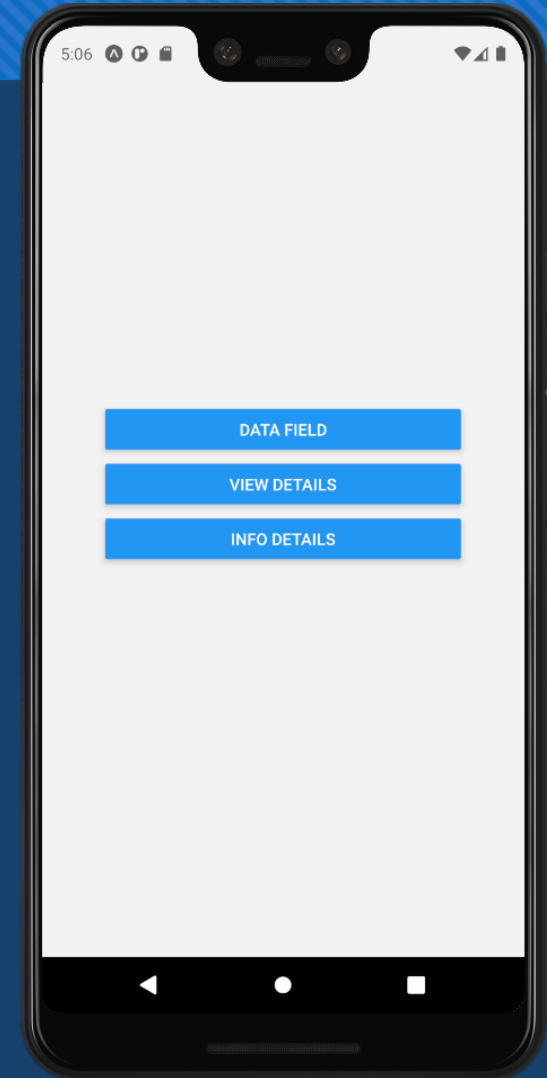
```
npx create-expo-app SurveyApp  
cd SurveyApp
```

## 2. Install the project dependencies:

```
npm install @react-navigation/native  
npm install @react-navigation/native-stack  
npm install expo-location  
npm install expo-camera
```

To start the app, run the following command:

```
npx expo start
```





# Troubleshooting Common Issues

- Metro Bundler Issues
  - Fix: Clear cache `npx react-native start --reset-cache`
- Android Build Failures
  - Check Java and Gradle versions
  - Ensure Android SDK path is correct

# Conclusion



- React Native setup may seem complex but gets easier with practice.
- Proper setup saves time in debugging and improves development efficiency.
- Ready to build your first app!