Mobile App Development

Overview

Mobile App Design and IoT are two of the most exciting areas of Technology. In this class you will learn how to create a Mobile App. Your App will control an IoT device. You will create your App using React Native. React Native is a popular framework maintained by Facebook that enables cross-platform native apps using JavaScript. Some knowledge of programming and JavaScript is recommended but not essential.

Dates

Start (Week beginning):
Half Term Break:
End (Week beginning):

Contents

1. Introduction to React Native and Expo
2. Managing your code changes with Git
3. Styling your App with NativeBase
4. Navigation with react-navigation
5. Bringing it all together
6. Learning JavaScript
7. Controlling IoT Devices
8. Final Project

Github

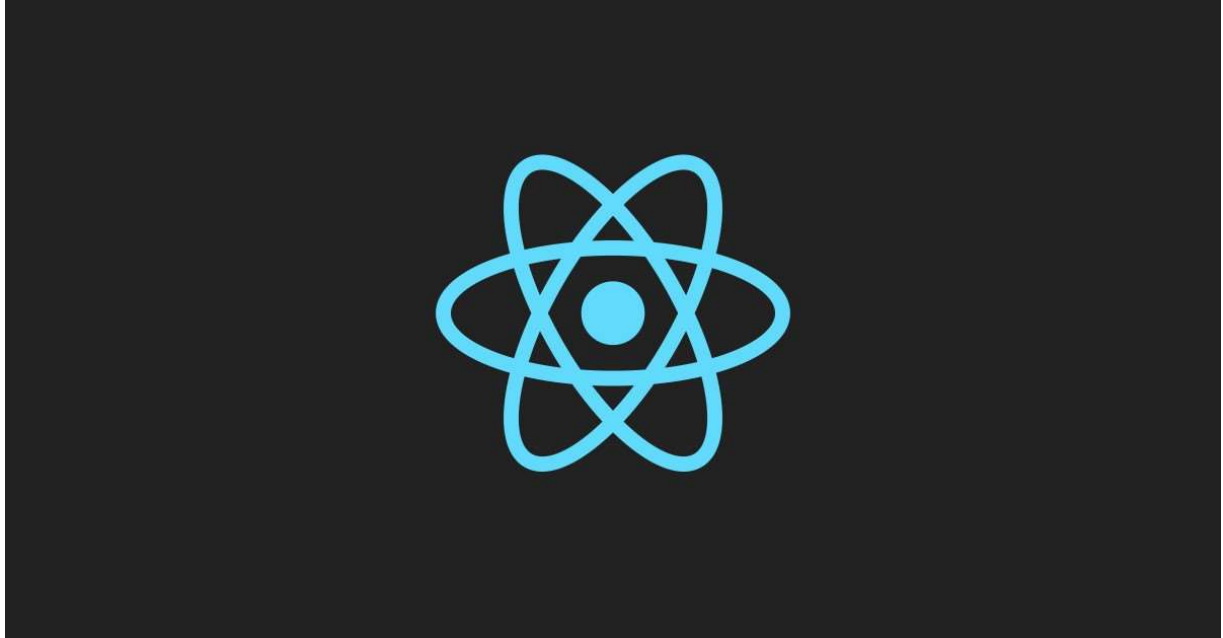https://github.com/chrismatchett/expo-demos

Monkey see, monkey do

You will make an App during the next seventeen weeks. It may take a lot longer for you to understand what you have made. Thankfully, others have made the tools you need to succeed.

React Native

What is React Native?

- RN enables you to create native apps for Android and iOS using React.
- RN was released by Facebook in 2015.
- The following apps are built using RN; Facebook, Instagram, Pinterest, Skype and Uber Eats.

What does Native mean?

- iOS apps are generally written in Swift or Objective-C and Android apps are written in Java.
- Apps written in these languages can use the native features of the mobile device e.g. the device's camera and UI controls.
- RN is a JavaScript library that allows you to use native UI controls and everything in the native platform.

Why is React Native a big deal?

- Programming in Javascript has become very popular.
- Companies do not need two teams of Swift/Java developers to make one app.
- RN allows live reloads of your code changes without the need to re-compile.
- There are other crossover solutions for making apps but they do not give you access to the mobile device's native features.
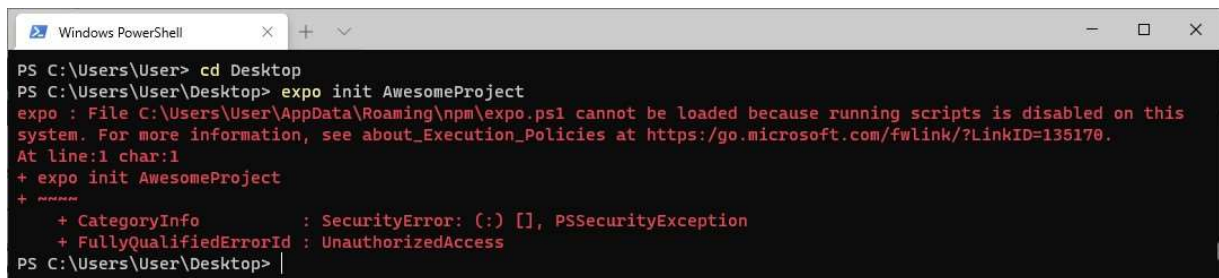
Getting started with Expo

- The RN documentation is excellent, https://reactnative.dev/docs/getting-started.
- Follow these instructions carefully to setup your environment.
    - https://reactnative.dev/docs/environment-setup .
    - Our environment will be Expo CLI Quickstart.
    - Follow the instructions carefully to set up Expo.

Troubleshooting

You may not have permission to run the command 'expo init AwesomeProject'. If so open
Powershell as an administrator and run the following command;

```
Set-ExecutionPolicy RemoteSigned
```


Start your Expo App

Make sure you are in your app's folder in a command window;

```
cd AwesomeProject
```

Start your Expo project and follow the instructions;

```
expo start
```

Learn Expo

Work through the Tutorial exercises at https://docs.expo.io/get-started/create-a-new-app/.

- Tutorial
    - First steps
    - Styling text
    - Adding an image
    - Creating a button
    - Picking an image
    - Sharing the image
    - Handling platform differences
    - Configuring a splash screen and app icon
    - Learning more