Overview React Native

Bala Krishna Ragala

The Plan

- A word on hybrid mobile development
- What is React Native
- Preparing development environment
- Node, Watchman, Xcode, Android Studio
- Create-react-native-app
- Creating And Running HelloWorld React Native
- Birds view on mobile platforms ios and android
  - https://code.facebook.com/posts/1014532261909640/react-native-bringing-modern-web-techniques-to-mobile/
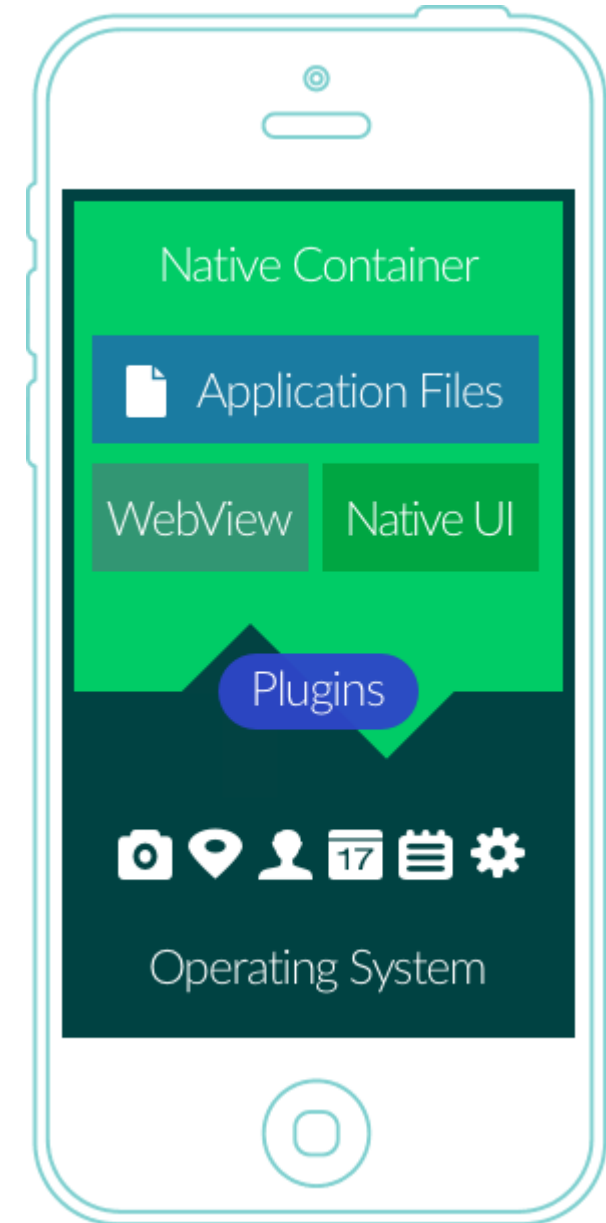- First Debugging steps

Native is difficult?

- There are many reasons the native mobile environment is more difficult to work with than the web

- When building on the web, we can simply save our files and reload the browser to see the result of our changes.

- On native, however, we need to recompile after every change, even if we just want to shift text a few pixels over on the screen

Native is necessary

- Even though developing native mobile apps takes longer, there are many reasons why we can produce better experiences on the mobile platforms than we can on the web

- We have access to platform-specific UI components, like maps, date pickers, switches, and navigation stacks

Hybrid mobile development

- Hybrid mobile apps are like any other apps you'll find on your phone. They install on your device. You can find them in app stores. With them, you can play games, engage your friends through social media, take photos, track your health, and much more.

Native Container

Application Files

WebView | Native UI

Plugins

Operating System

https://developer.telerik.com/wp-content/uploads/2015/03/hybrid-app-architecture.png

Why hybrid

- Hybrid mobile applications provide a way for developers to re-use their existing skills in web development
- Hybrid mobile application development enables developers to target more than one platform
- One source code, less bugs, less testing effort
- Faster release cycle

What is React Native

- A framework to build native mobile apps using JS and React
- All UI components are real native components and not HTML and CSS
- Great tooling support
- Code reuse
- Plug native code to JS code if required

create-react-native-app

- **Minimal "Time to Hello World"**: Create React Native App should reduce the setup time it takes to try building a mobile app to the absolute minimum, ideally on par with React web development (especially as seen with [Create React App](#)).

- **Develop on Your Device**: It should be easy to develop on a physical device when you want to test how your app feels and responds to inputs.

- **One Build Tool**: If you just want to get started with React Native, you shouldn't need to install Xcode, Android Studio, NDKs, or mess with environment variables.

- **No Lock-In**: You can always "eject" to your own build setup if you need to write custom native code or modify how your app is built.

Expo

- Expo apps are React Native apps which contain the [Expo SDK](). The SDK is a native-and-JS library which provides access to the device's system functionality (things like the camera, contacts, local storage, and other hardware).

- **That means you don't need to use Xcode or Android Studio, or write any native code, and it also makes your pure-JS project very portable because it can run in any native environment containing the Expo SDK.**

- Expo also provides UI components to handle a variety of use-cases that almost all apps will cover but are not baked into React Native core, e.g. icons, blur views, and more.

Hello World React Native

create-react-native-app mystore

Your tools

```
yarn start
  Starts the development server so you can open your app in the Expo
  app on your phone.

yarn run ios
  (Mac only, requires Xcode)
  Starts the development server and loads your app in an iOS simulator.

yarn run android
  (Requires Android build tools)
  Starts the development server and loads your app on a connected Android
  device or emulator.



yarn test
  Starts the test runner.

yarn run eject
  Removes this tool and copies build dependencies, configuration files
  and scripts into the app directory. If you do this, you can't go back!
```
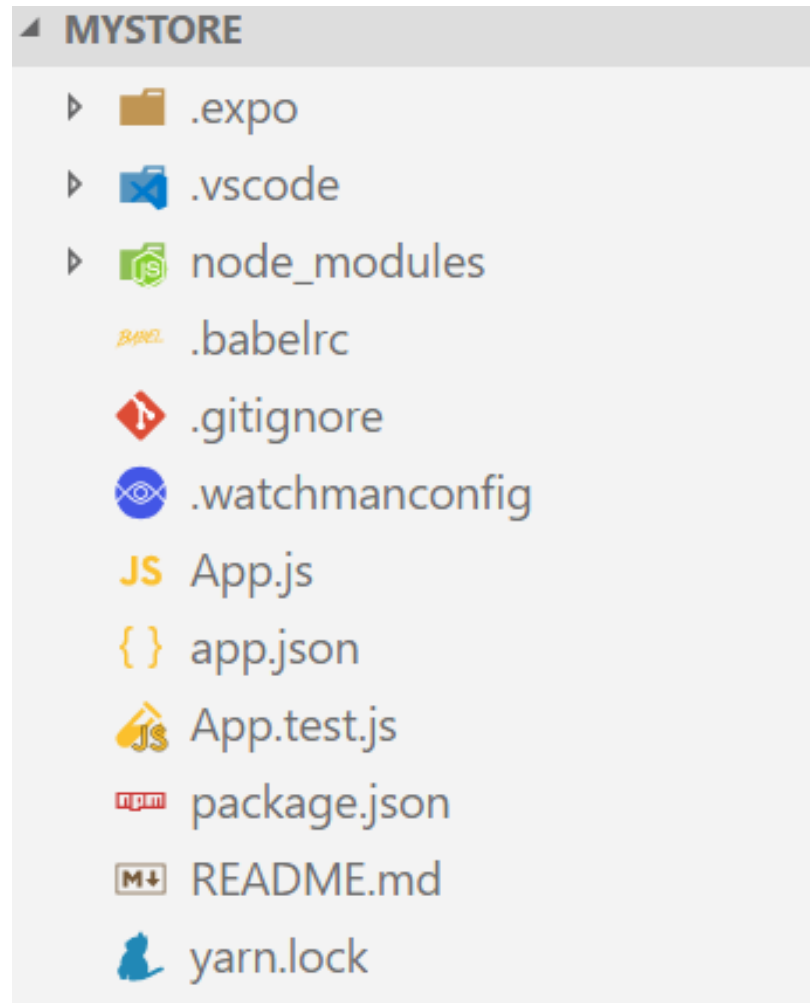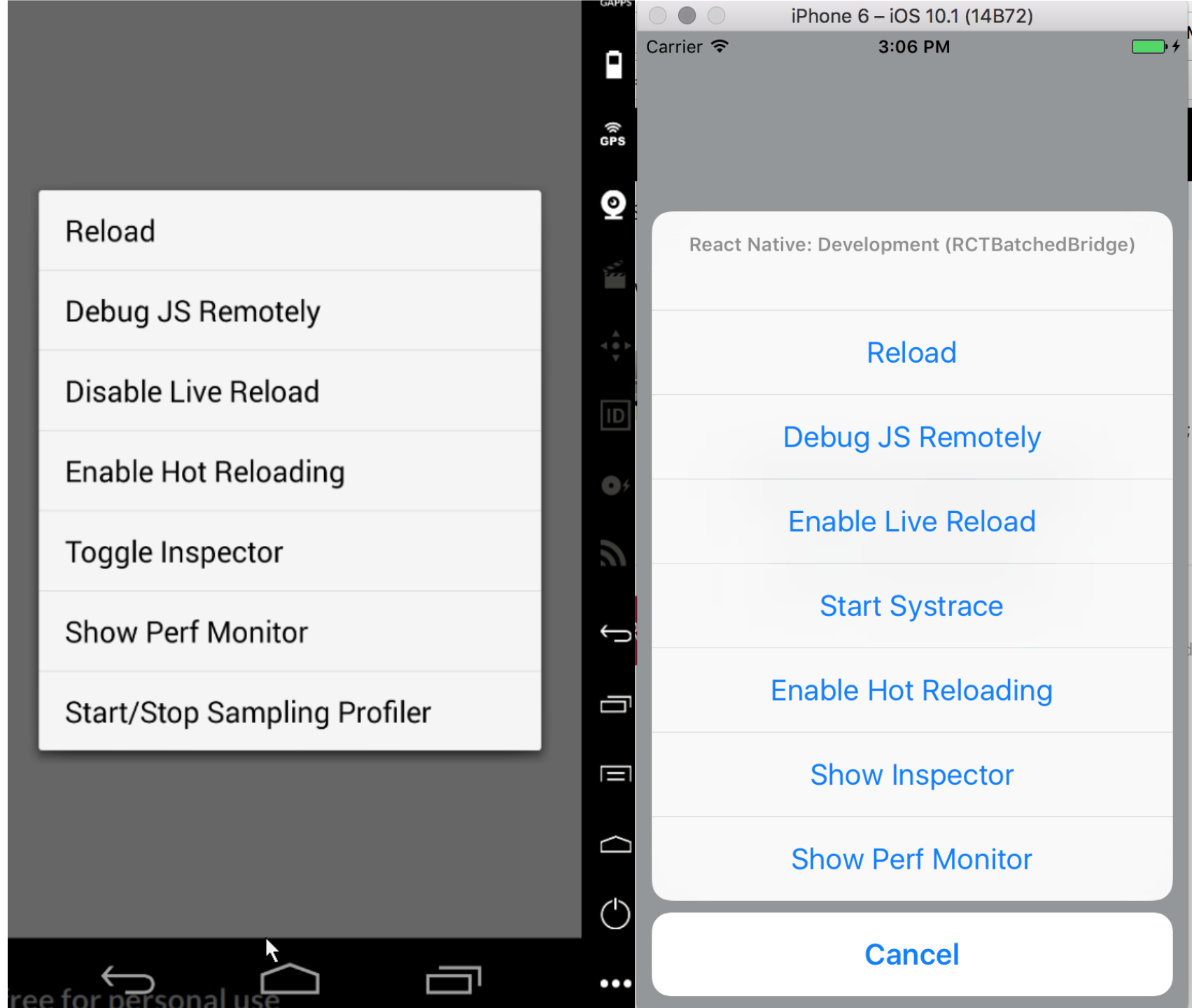
Explore Folder Structure

NOTE: No platform specific code (expo app)

Debugging

- ios - CMD/CTRL + D (mac/win)
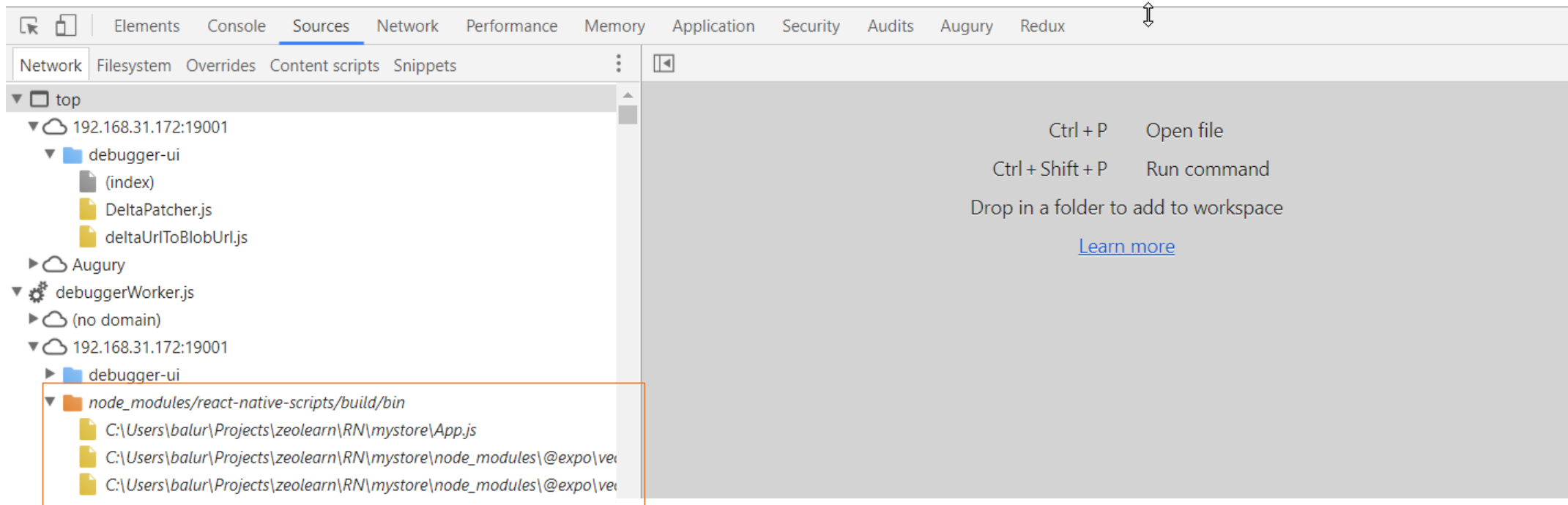- Android – CMD/CTRL + M

Debug JS Remotely

Question Time – Fun Time

- Expo is new react native framework, true or false?
- With hybrid development – delivery times are fast, true or false ?
- How do you run app on ios simulator?
- What does yarn eject do in create-react-native-app project?
- How do you enable debugging?
- React native uses webview to present user interface