React Native

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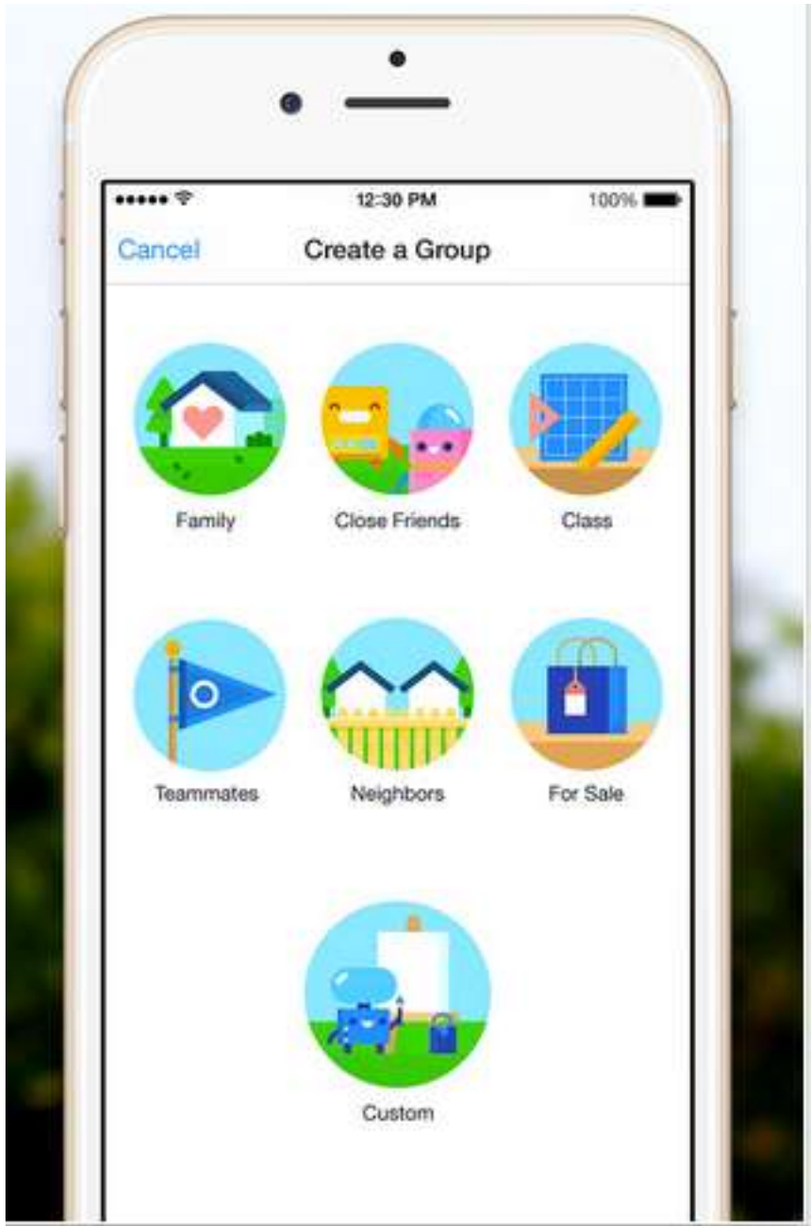
NATIVE mobile apps

Separated thread

Events bridge

Native UI



How to start

- Buy Mac, install Xcode
- Install node.js, npm
- npm install -g react-native-cli
- react-native init LvivJSProject
- Open LvivJSProject.xcodeproj and hit run in Xcode
- Open index.ios.js in text editor and edit some lines

React Native Webpack

app/*.js(x) -> index.ios.js

1

```
entry: path.join(__dirname, '/app/index.jsx'),
```

2

```
loaders: [
    {
        test: /\.(jsx|js)$/,
        exclude: /node_modules/,
        loaders: ['babel-loader?optional=runtime']
    },
```

3

```
output: {
    path: path.join(__dirname, '/'),
    filename: 'index.ios.js',
    libraryTarget: 'commonjs'
},
```

React Native Webpack

Fix React Native imports

```
externals: [require('./ignore-modules')],
```

React Native Webpack

ESLint

1

```
preLoaders: [
    {
        test: /\.jsx$|\.js$/,
        loaders: ['eslint'],
        exclude: /node_modules/
    }
],
```

2

```
eslint: {
    configFile: '.eslintrc',
    emitError: true
},
```

React Native Webpack

ESLint

```
{
  "env": {
    "browser": true,
    "node": true
  },

  "parser": "babel-eslint",

  "plugins": ["react"],

  "ecmaFeatures": {
    "modules": true,
  },

  "rules": {
```

1

RN base concepts

- *.js -> index.ios.js
- RN pre-defined tags instead of html
- Inline styles (CSS in JS)
- RN components (like using components library)

RN pre-defined tags

```
<View style={FormJSS.login.formRow }>
  <TextInput
    style={ FormJSS.login.input }
    placeholder={'Deploy server address'}
    onChangeText={this.onChangeText.bind(this, 'server')}
    value={this.state.server}
  />
</View>
```

JSS and StyleSheet

- CSS StyleSheets abstraction -> iOS layout
- Flexbox from Web to Native
- Immutable
- Optimized (cached in table, using reference)

JSS and StyleSheet

```
import { StyleSheet } from 'react-native';
import Colors from './colors-scheme';

export default StyleSheet.create({
  buttonWrapper: {
    flex: 1,
    flexDirection: 'row',
    justifyContent: 'center',
    alignItems: 'center',
    width: 350,
    height: 40,
    borderRadius: 2
  },

  text: {
    fontSize: 20,
    fontWeight: '200'
  }
});
```

JSS and StyleSheet

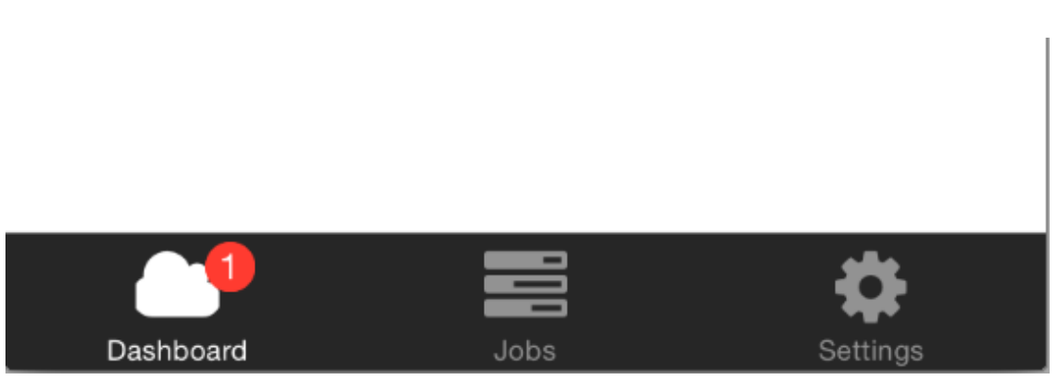
```
<View style={Styles.headerStatusTime}>

  <Text numberOfLines={1} style={Styles.headerStatusTimeText}>
    {startTime}
  </Text>

</View>
```

JSS and StyleSheet

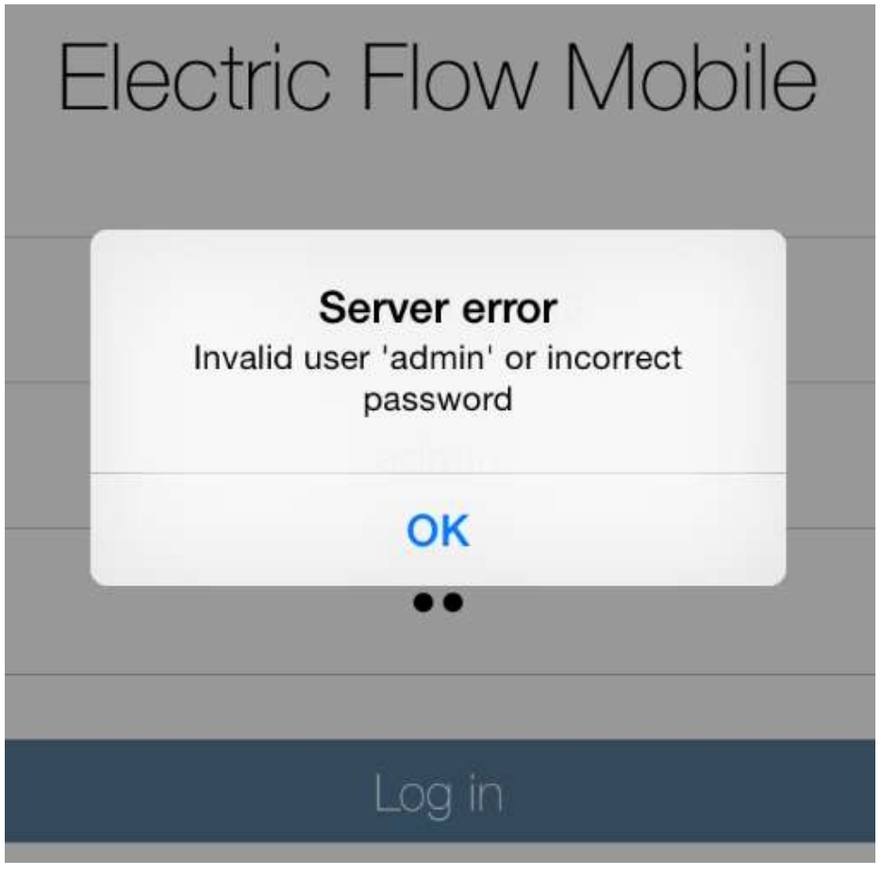
```
<View style={{flex: '1', color: '#FF00F1'}}>
   <TextInput
      style={ FormJSS.login.input }
      placeholder={'Deploy server address'}
      onChangeText={this.onChangeText.bind(this, 'server')}
      value={this.state.server}
   />
</View>
```

Basic NATIVE components

TabBarIOS

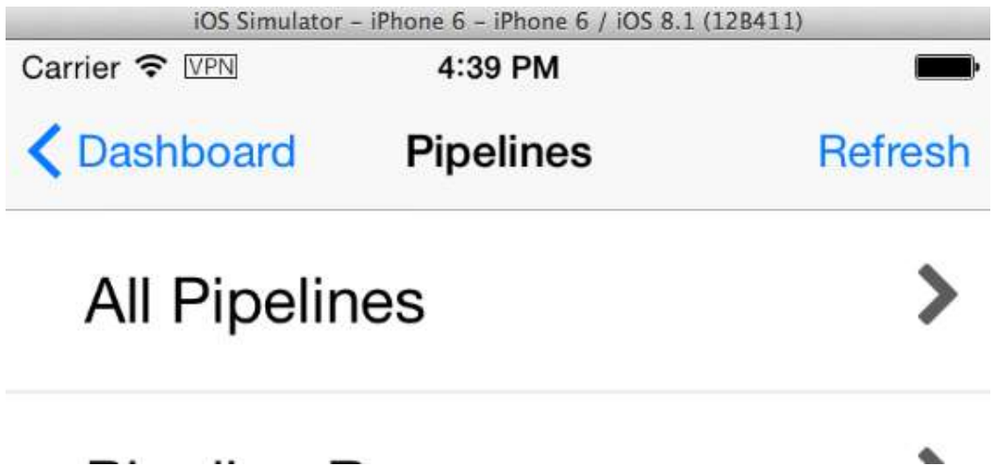


AlertIOS

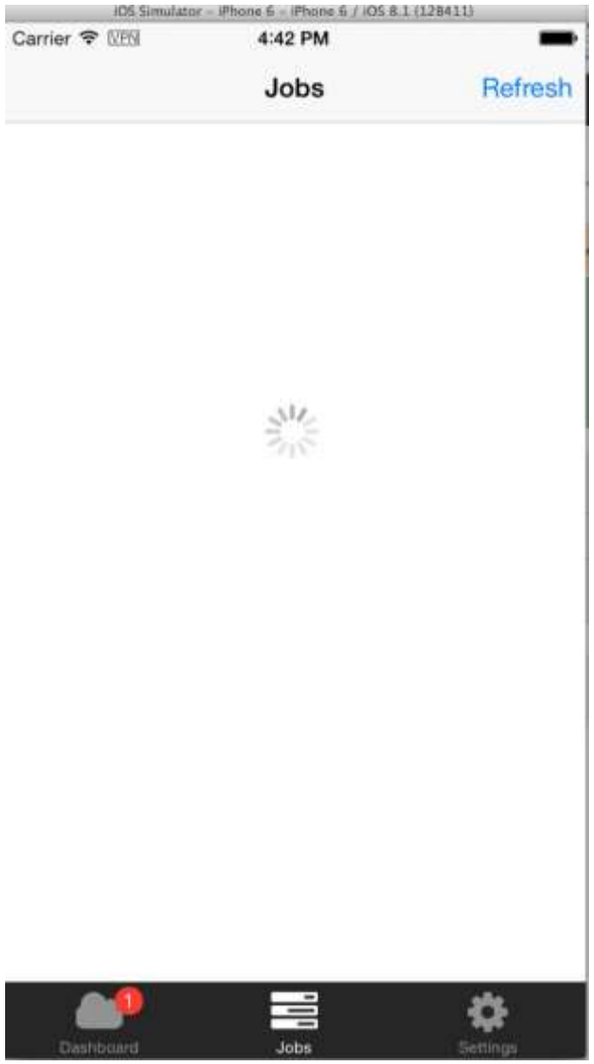


Basic NATIVE components

NavigatorIOS
(title, swipes, back, etc)



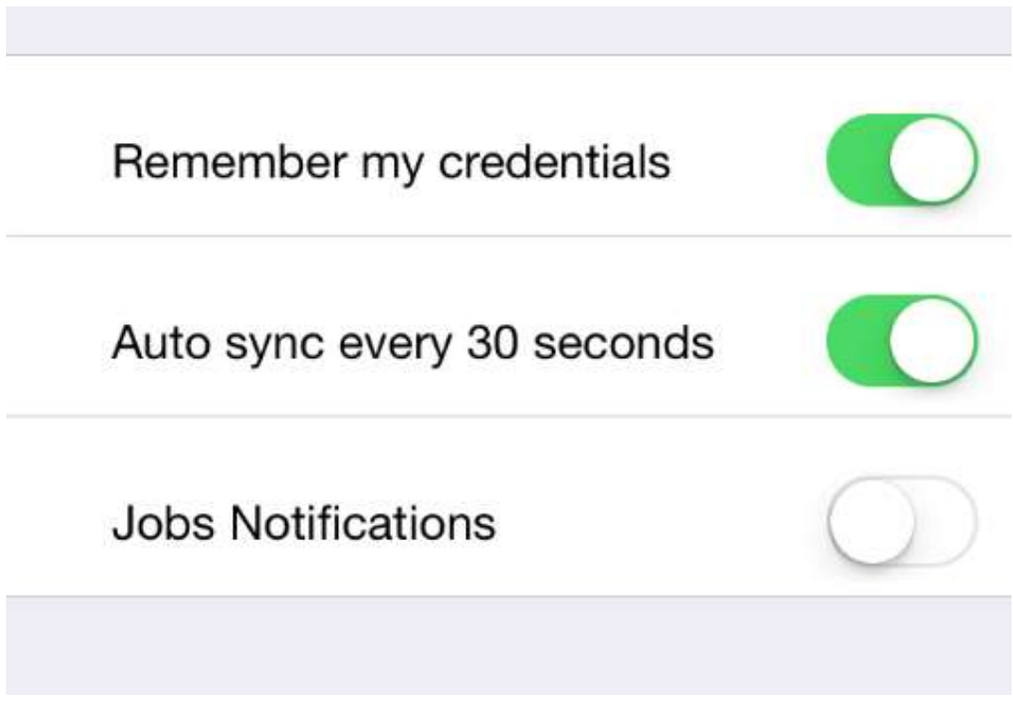
ActivityIndicatorIOS



Basic NATIVE components

TouchableHighlight

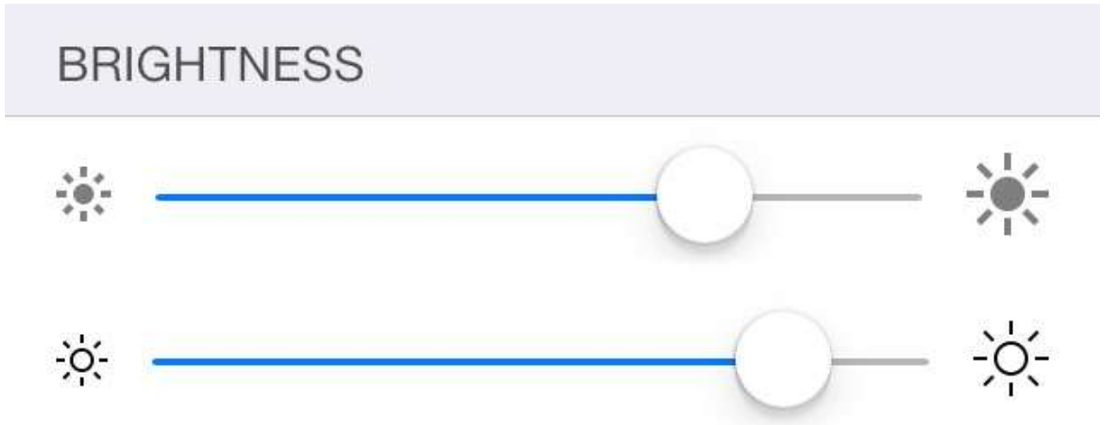
SwitchIOS



Basic NATIVE components

PickerIOS

SliderIOS



Basic NATIVE components

- AsyncStorage (key-value pairs)
- TextInput
- View
- TouchableHighlight

Network requests

XMLHttpRequest

on top of iOS networking APIs

Network requests

```
var request = new XMLHttpRequest();
request.onreadystatechange = (e) => {
  if (request.readyState !== 4) {
    return;
  }

  if (request.status === 200) {
    console.log('success', request.responseText);
  } else {
    console.warn('error');
  }
};

request.open('GET', 'https://mywebsite.com/endpoint.php');
request.send();
```

Network requests

Fetch

working specification implementation top of iOS

Network requests

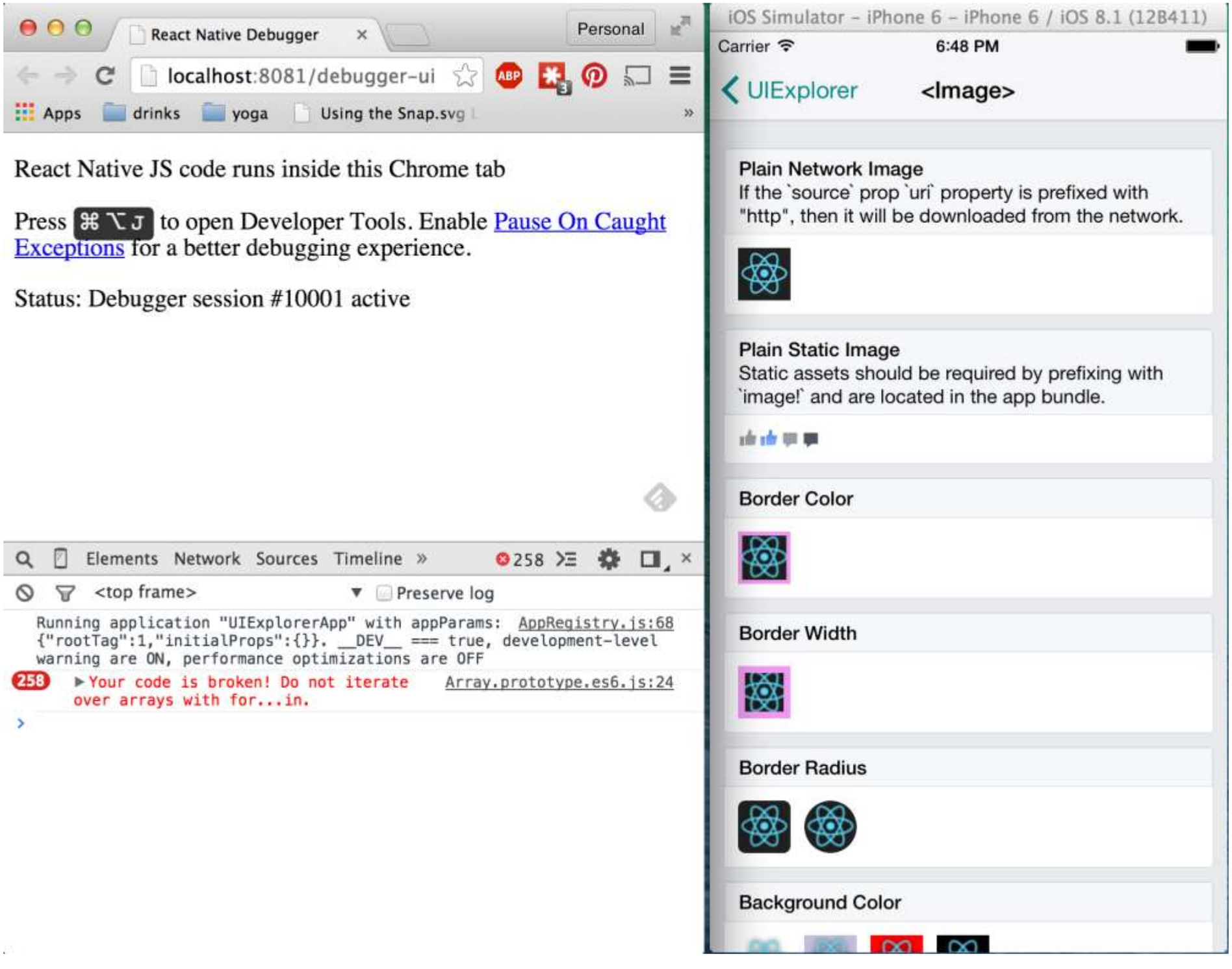
```
fetch('http://' + serverAddr + ':8000', {
  method: 'post',
  headers: {
    'Accept': 'application/json',
    'Content-Type': 'application/json'
  },
  body: requestBody
})
.then((rawResponse) => {
  return rawResponse.json();
})
.then((response) => {
  onDone.resolve(parseResponse(response));
})
.catch(handleServerError.bind(null, onDone));
```

Debugging

Just a browser:

console.log, breakpoint

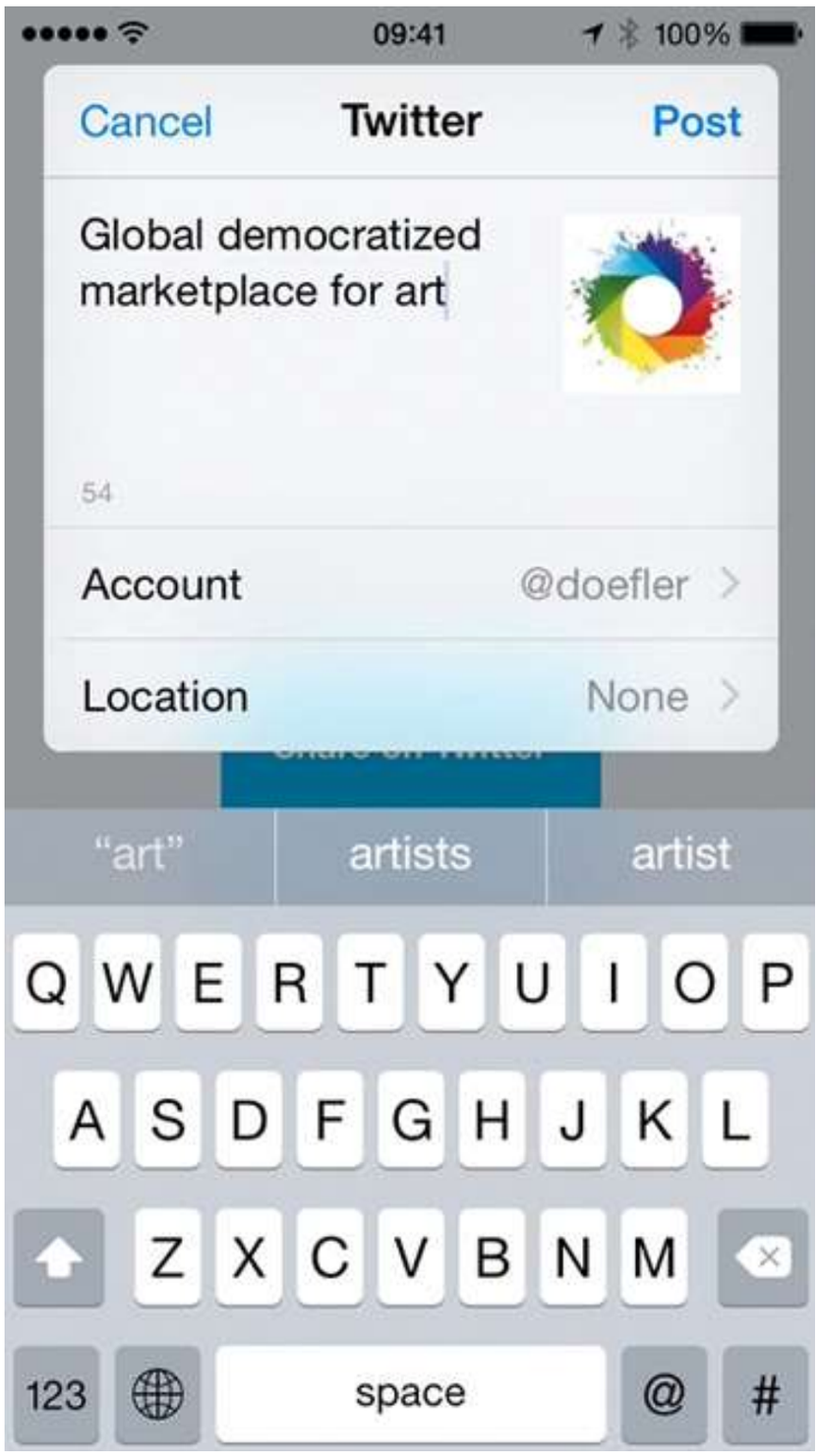
Debugging


React Native Debugger
Personal
localhost:8081/debugger-ui
Apps
drinks
yoga
Using the Snap.svg
React Native JS code runs inside this Chrome tab
Press ⌘ ⌥ J to open Developer Tools. Enable Pause On Caught Exceptions for a better debugging experience.
Status: Debugger session #10001 active
Elements
Network
Sources
Timeline
258
<top frame>
Preserve log
Running application "UIExplorerApp" with appParams: {"rootTag":1,"initialProps":{}}. __DEV__ === true, development-level warning are ON, performance optimizations are OFF
AppRegistry.js:68
258
Your code is broken! Do not iterate over arrays with for...in.
Array.prototype.es6.js:24
iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.1 (12B411)
Carrier
6:48 PM
UIExplorer
<Image>
Plain Network Image
If the `source` prop `uri` property is prefixed with "http", then it will be downloaded from the network.
Plain Static Image
Static assets should be required by prefixing with `image!` and are located in the app bundle.
Border Color
Border Width
Border Radius
Background Color

Infrastructure

Just

Infrastructure: JS




```
myth:tes vedmak$ npm install react-native-social-share -SD
npm WARN package.json react-native-cli@0.1.3 No repository field.
npm http GET https://registry.npmjs.org/react-native-social-share
npm http 200 https://registry.npmjs.org/react-native-social-share
```

```
onTweet() {

  import { KDSocialShare } from 'NativeModules';

  KDSocialShare.tweet({
    'text': this.props.text,
    'link': 'http://electric-cloud.com/products/electricflow/deploy-automation/',
    'imagelink': img
    }, (results) => {
      console.log(results);
    }
  );
},
```

Infrastructure: JS


```
myth:tes vedmak$ npm install react-native-camera -SD
npm WARN package.json react-native-cli@0.1.3 No repository field.
npm http GET https://registry.npmjs.org/react-native-camera
npm http 200 https://registry.npmjs.org/react-native-camera
```

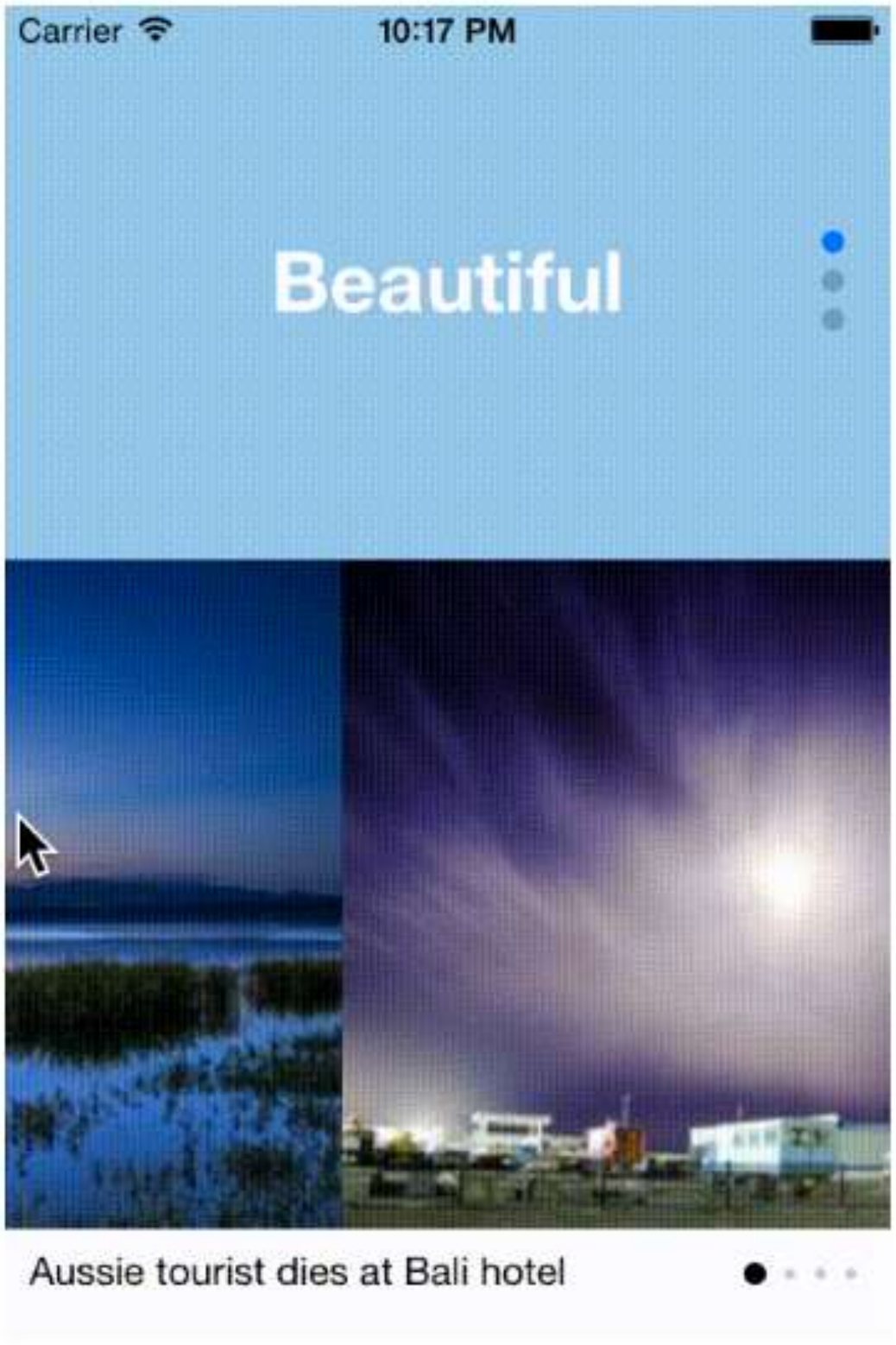
```
import Camera from 'react-native-camera';

//....
render() {
  return (
    <Camera
      ref="cam"
      style={styles.container}
      onBarCodeRead={this._onBarCodeRead}
      type={this.state.cameraType}
    >
      <TouchableHighlight onPress={this.onTakePicture}>
        <Text>Take Picture</Text>
      </TouchableHighlight>
    </Camera>
  );
}
```

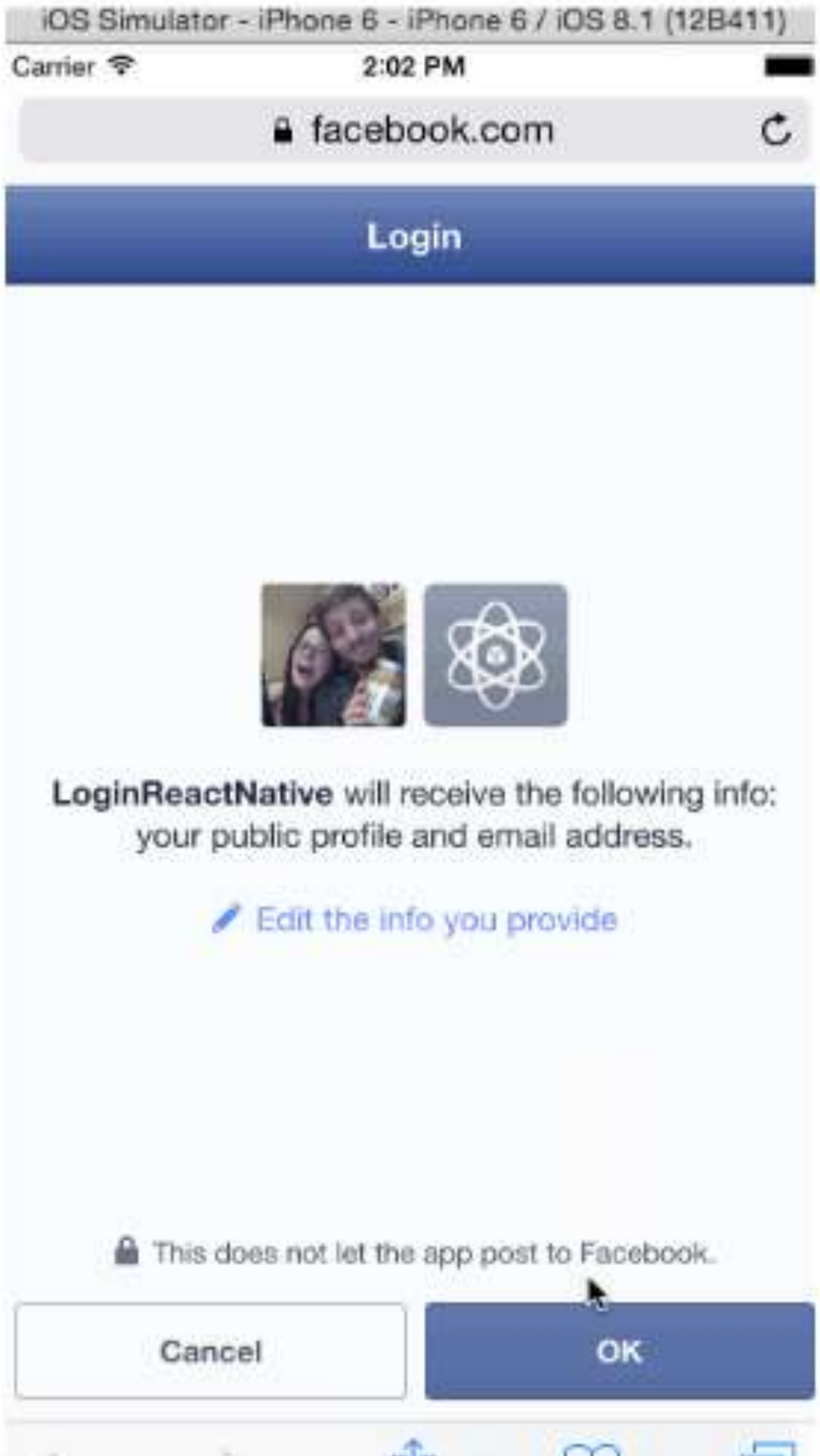
Infrastructure: JS

```
myth:tes vedmak$ npm install react-native-vector-icons -SD
npm WARN package.json react-native-cli@0.1.3 No repository field.
npm http GET https://registry.npmjs.org/react-native-vector-icons
npm http 200 https://registry.npmjs.org/react-native-vector-icons
```

```
import Icon from 'react-native-vector-icons/FontAwesome';

<Icon name={this.props.icon} size={20} color="white" />
```

Infrastructure: JS



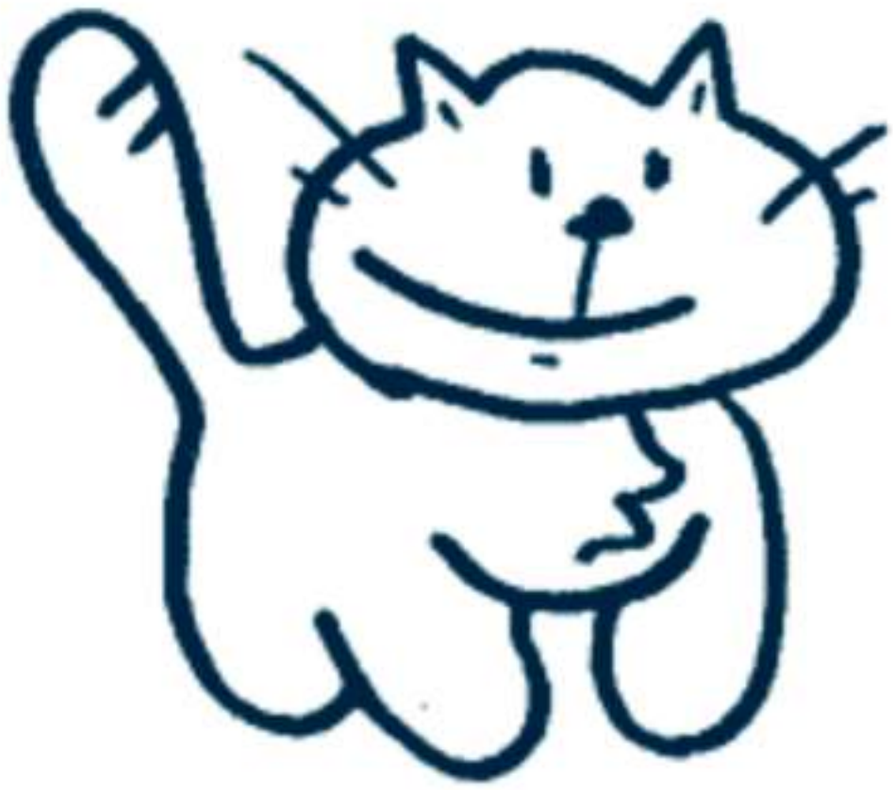


Infrastructure: JS

```
npm install react-native-mapbox-gl --save
```

Integrating with existing app

- // ReactView.h
- #import <UIKit/UIKit.h>
- @interface ReactView : UIView
- @end



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