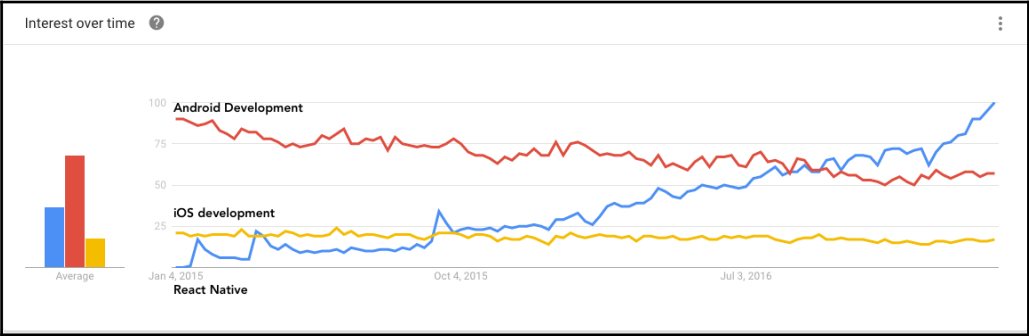
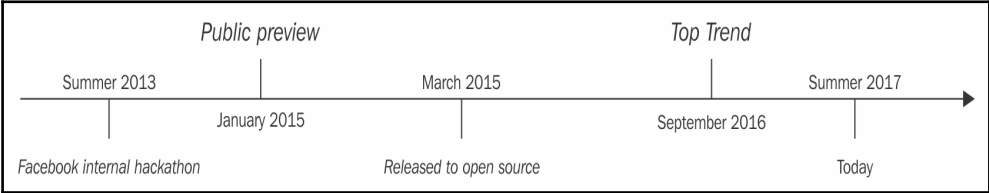
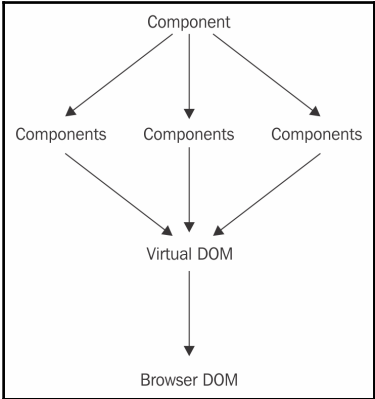
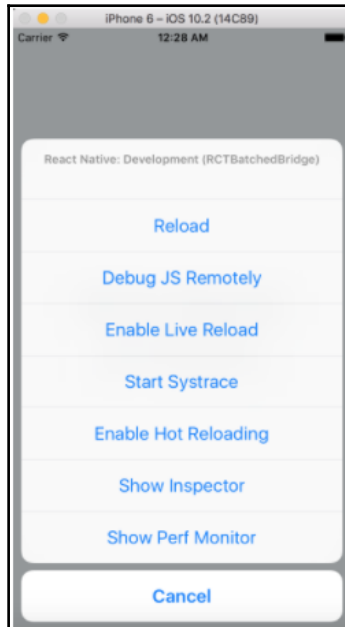
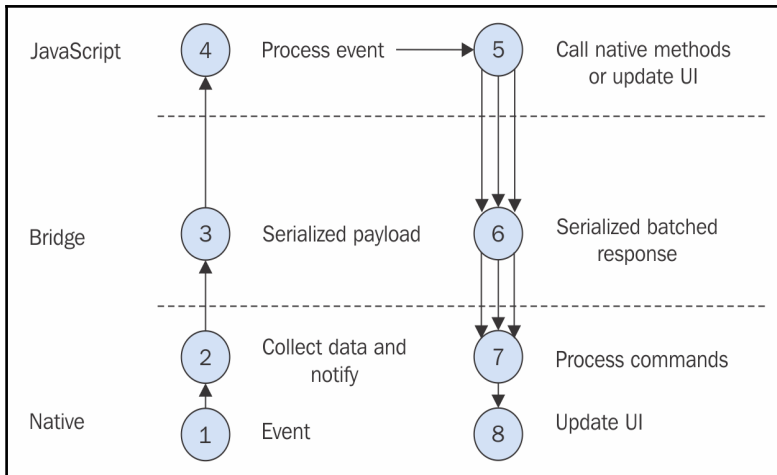


# Chapter 1: Understanding Why React Native is the Future of Mobile Apps



$$UI = f(state)$$









# Chapter 2: Working with React Native



## Java SE Development Kit 8u121

You must accept the [Oracle Binary Code License Agreement for Java SE](#) to download this software.

Accept License Agreement  Decline License Agreement

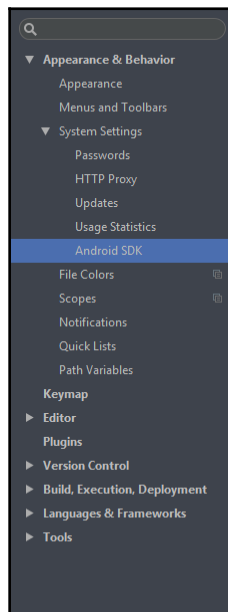
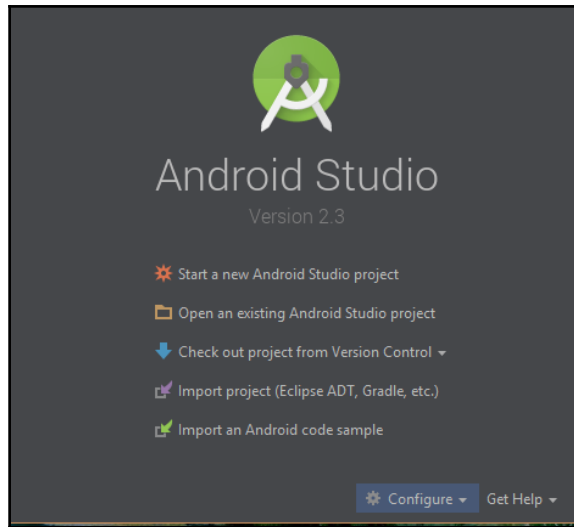
Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	77.86 MB	<a href="#">jdk-8u121-linux-arm32-vfp-hflt.tar.gz</a>
Linux ARM 64 Hard Float ABI	74.83 MB	<a href="#">jdk-8u121-linux-arm64-vfp-hflt.tar.gz</a>
Linux x86	162.41 MB	<a href="#">jdk-8u121-linux-i586.rpm</a>
Linux x86	177.13 MB	<a href="#">jdk-8u121-linux-i586.tar.gz</a>
Linux x64	159.96 MB	<a href="#">jdk-8u121-linux-x64.rpm</a>
Linux x64	174.76 MB	<a href="#">jdk-8u121-linux-x64.tar.gz</a>
Mac OS X	223.21 MB	<a href="#">jdk-8u121-macosx-x64.dmg</a>
Solaris SPARC 64-bit	139.64 MB	<a href="#">jdk-8u121-solaris-sparcv9.tar.Z</a>
Solaris SPARC 64-bit	99.07 MB	<a href="#">jdk-8u121-solaris-sparcv9.tar.gz</a>
Solaris x64	140.42 MB	<a href="#">jdk-8u121-solaris-x64.tar.Z</a>
Solaris x64	96.9 MB	<a href="#">jdk-8u121-solaris-x64.tar.gz</a>
Windows x86	189.36 MB	<a href="#">jdk-8u121-windows-i586.exe</a>
Windows x64	195.51 MB	<a href="#">jdk-8u121-windows-x64.exe</a>

Check the components you want to update/install. Click Next to continue.

- Android SDK – (652 MB)
- Android SDK Platform
  - API 25: Android 7.1.1 (Nougat) – (159 MB)
- Performance (Intel® HAXM) – (installed)
- Android Virtual Device – (675 MB)

The collection of Android platform APIs, tools and utilities that enables you to debug, profile, and compile your apps.

The setup wizard will update your current Android SDK installation (if necessary) or install a new version.



SDK Platforms   SDK Tools   SDK Update Sites

Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, Android Studio will automatically check for updates. Check "show package details" to display individual SDK components.

Name	API Level	Revision	Status
▶ Android 7.1.1 (Nougat)			
▶ Android 7.0 (Nougat)			
▼ Android 6.0 (Marshmallow)			
<input checked="" type="checkbox"/> Google APIs	23	1	Installed
<input checked="" type="checkbox"/> Android SDK Platform 23	23	3	Installed
<input checked="" type="checkbox"/> Sources for Android 23	23	1	Installed
<input type="checkbox"/> Android TV ARM EABI v7a System Image	23	3	Not installed
<input type="checkbox"/> Android TV Intel x86 Atom System Image	23	9	Not installed
<input type="checkbox"/> Android Wear ARM EABI v7a System Image	23	6	Not installed
<input type="checkbox"/> Android Wear Intel x86 Atom System Image	23	6	Not installed
<input type="checkbox"/> ARM EABI v7a System Image	23	6	Not installed
<input type="checkbox"/> Intel x86 Atom System Image	23	9	Not installed
<input checked="" type="checkbox"/> Intel x86 Atom_64 System Image	23	9	Installed
<input type="checkbox"/> Google APIs ARM EABI v7a System Image	23	20	Not installed
<input type="checkbox"/> Google APIs Intel x86 Atom System Image	23	20	Not installed
<input checked="" type="checkbox"/> Google APIs Intel x86 Atom_64 System Image	23	20	Installed
▼ Android 5.1 (Lollipop)			
<input type="checkbox"/> Google APIs	22	1	Not installed
<input type="checkbox"/> Android SDK Platform 22	22	2	Not installed
<input type="checkbox"/> Sources for Android 22	22	1	Not installed
<input type="checkbox"/> Android TV ARM EABI v7a System Image	22	1	Not installed
<input type="checkbox"/> Android TV Intel x86 Atom System Image	22	3	Not installed
<input type="checkbox"/> ARM EABI v7a System Image	22	2	Not installed

Show Package Details







## Your Virtual Devices

Android Studio



Virtual devices allow you to test your application without having to own the physical devices.

[+ Create Virtual Device...](#)

To prioritize which devices to test your application on, visit the [Android Dashboards](#), where you can get up-to-date information on which devices are active in the Android and Google Play ecosystem.



# Select Hardware

Android Studio

## Choose a device definition

Q

Category	Name	Size	Resolution	Density
TV	Pixel XL	5.5"	1440x2560	560dpi
Wear	Pixel	5.0"	1080x1920	xxhdpi
Phone	Nexus S	4.0"	480x800	hdpi
Tablet	Nexus One	3.7"	480x800	hdpi
	Nexus 6P	5.7"	1440x2560	560dpi
	Nexus 6	5.96"	1440x2560	560dpi
	Nexus 5X	5.2"	1080x1920	420dpi
	Nexus 5	4.95"	1080x1920	xxhdpi
	Nexus 4	4.7"	768x1280	xhdpi
	Galaxy Nexus	4.65"	720x1280	xhdpi
	5.4" FWVGA	5.4"	480x854	mdpi
	5.1" WVGA	5.1"	480x800	mdpi

### Nexus S



Size: normal  
Ratio: long  
Density: hdpi

New Hardware Profile

Import Hardware Profiles



Clone Device...

Previous

**Next**

Cancel

Finish

Help



# System Image

Android Studio

## Select a system image

Recommended x86 Images Other Images

Release Name	API Level	ABI	Target
Nougat	25	x86	Android 7.1.1 (with Google APIs)
Nougat Download	24	x86	Android 7.0 (with Google APIs)
<b>Marshmallow Download</b>	<b>23</b>	<b>x86</b>	<b>Android 6.0 (with Google APIs)</b>
Lollipop Download	22	x86	Android 5.1 (with Google APIs)

## Marshmallow



API Level  
**23**

Android  
**6.0**

Google Inc.

System Image  
**X86**

These images are recommended because they run the fastest and include support for Google APIs

Questions on API level?  
See the [API level distribution chart](#)



A system image must be selected to continue.

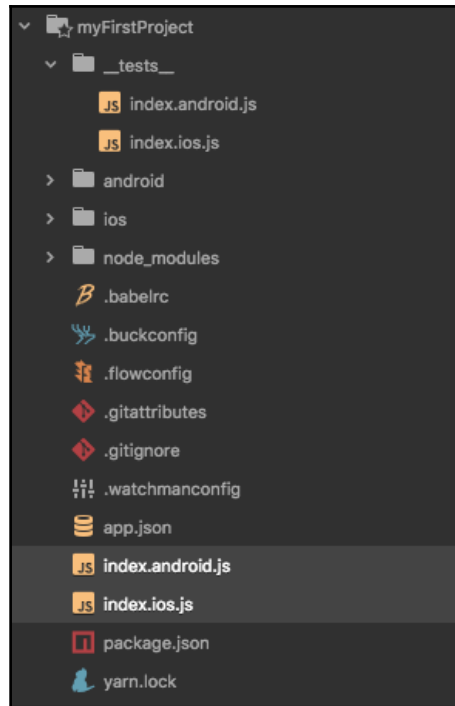
Previous Next Cancel Finish Help

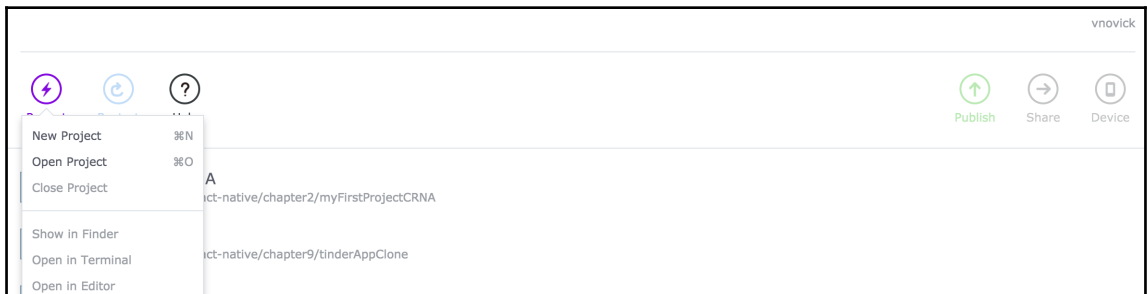
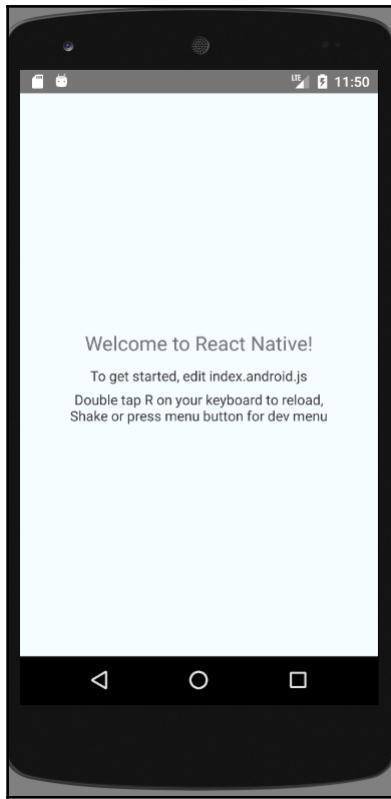


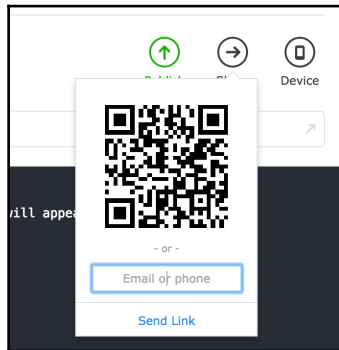
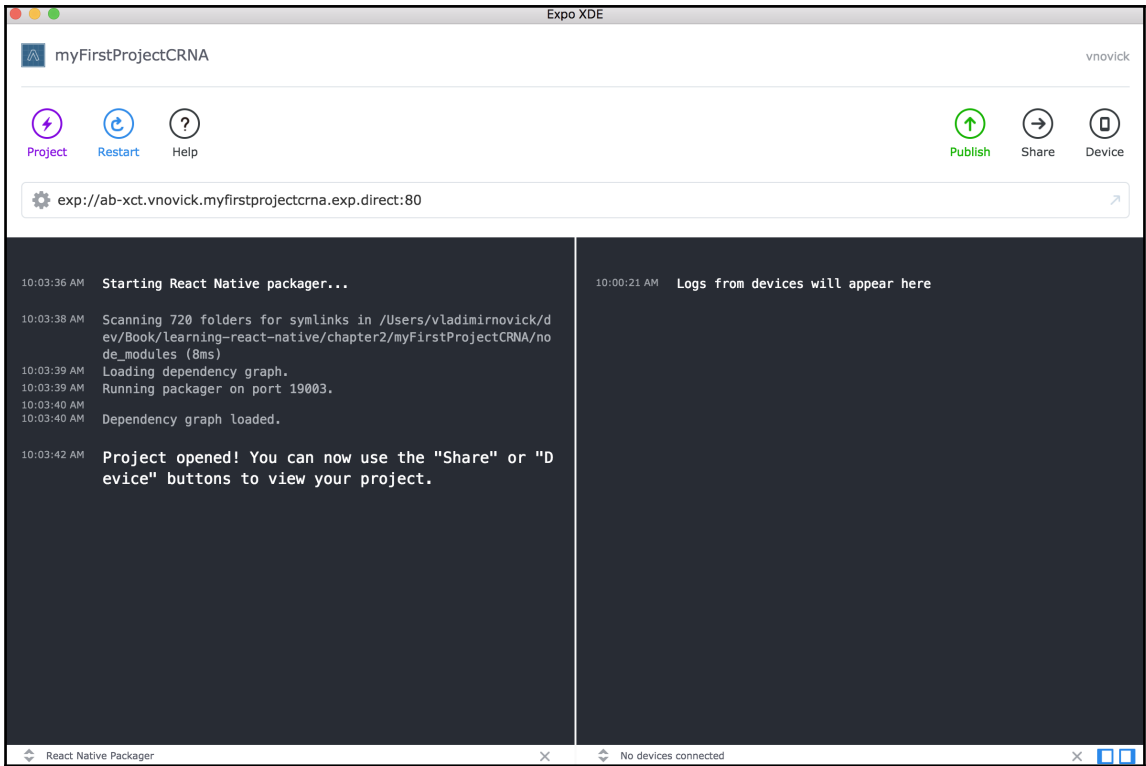
## Your Virtual Devices

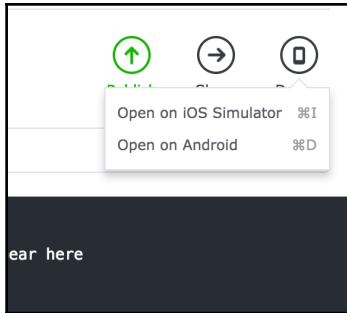
Android Studio

Type	Name	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	Nexus 5 API 23	1080 x 1920: xxhdpi	23	Android 6.0 (Google APIs)	x86	4 GB	
	Nexus 6 API 23	1080 x 1920: 420dpi	23	Android 6.0 (Google APIs)	x86	2 GB	









```
~/dev/Book/learning-react-native/chapter2/myFirstProjectCRNA(master) » npm run ios
> myFirstProjectCRNA@0.1.0 ios /Users/vladimirnovick/dev/Book/learning-react-native/chapter2/myFirstProjectCRNA
> react-native-scripts ios
10:09:41: Starting packager...
10:10:00: Starting simulator...
10:10:36: Packager started!
To view your app with live reloading, point the Expo app to this QR code.
You'll find the QR scanner on the Projects tab of the app.
```



```
Or enter this address in the Expo app's search bar:
exp://10.0.0.8:19000
Your phone will need to be on the same local network as this computer.
For links to install the Expo app, please visit https://expo.io.
Logs from serving your app will appear here. Press Ctrl+C at any time to stop.
If you restart the simulator or change the simulated hardware, you may need to restart this process.
```

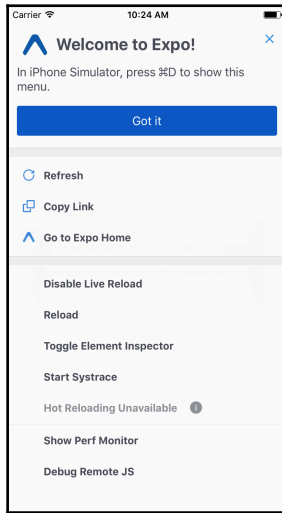
Carrier 10:10 AM

Friday 18  
Calendar Photos Maps Wallet  
Reminders News Health Settings

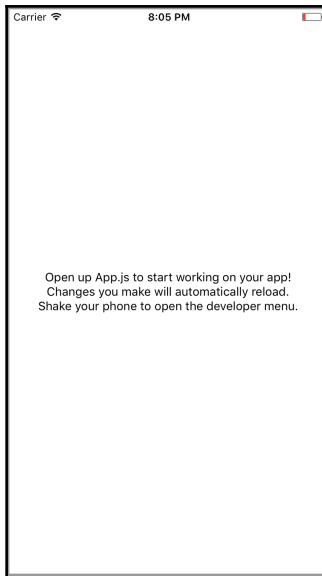
Open in "Expo"?

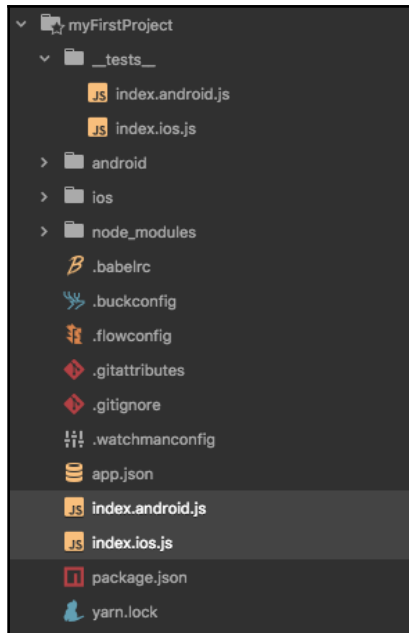
Cancel Open

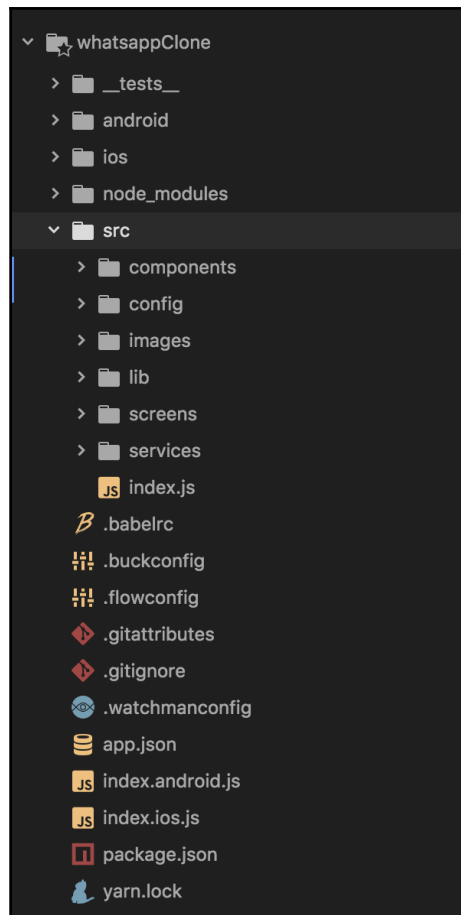
Safari Messages











# Chapter 3: Getting Familiar with React Native Components



Carrier 

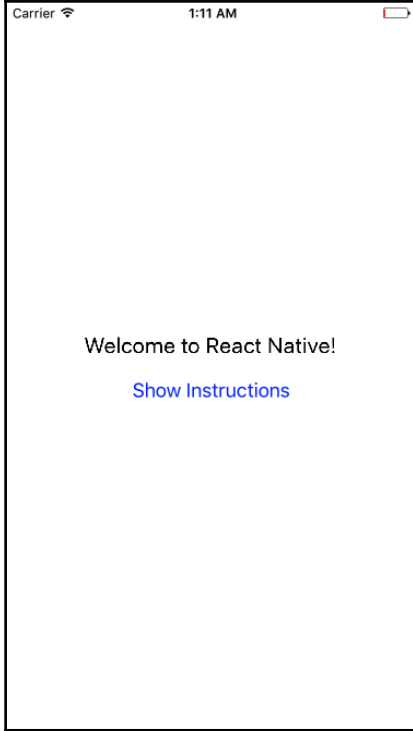
11:47 PM



## Welcome to React Native!

To get started, edit  
index.ios.js  
Press Cmd+R to reloa...





Carrier

1:11 AM



Welcome to React Native!

To get started, edit  
index.ios.js

[Show Instructions](#)



Carrier 

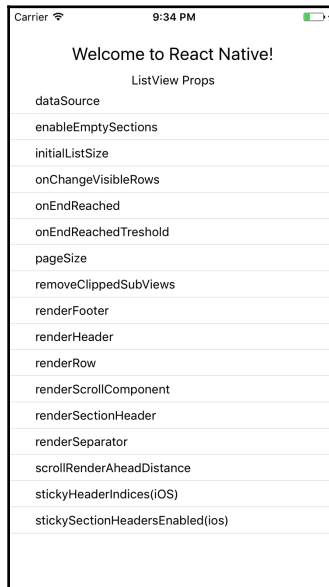
7:35 PM



Welcome to React Native!



Show Instructions



# Welcome to React Native!

## FlatList Props

---

### ItemSeparatorComponent

Rendered in between each item, but not at the top or bottom

---

### ListFooterComponent

Rendered at the bottom of all items

---

### ListHeaderComponent

Rendered at the top of all the items

---

### columnWrapperStyle

Optional custom style for multi-item rows generated when numColumns > 1

---

### data

plain array of data

---

### getItemLayout

let us skip measurement of dynamic content if you know height of items

---

### horizontal

If true, renders items horizontally

---

### keyExtractor

Used to extract unique key for item and index. Used for caching and re-ordering. Defaults to item.key

# Welcome to React Native!

## FlatList Props

### ItemSeparatorComponent

Rendered in between each item, but not at the top or bottom

### ListFo

Rendered a

### ListHeaderComponent

Rendered at the top of all the items

### columnWr

Optional custom style for multi-item > 1

### data

plain array of data

### getItemLayout

let us skip measurement of dynamic content if you kn

### horizontal

If true, renders items horizontally

### keyExtra

Used to extract unique key for item and ordering. Defaults to item.key

### numColumns

when horizontal={false} will implement flexWrap for items based on num of columns

### onEndReachedThreshold

let you define treshold, where onEndReached function will be called

Ref

### refreshing

Set this true while waiting for new data from a refresh

Takes an item from



# Welcome to React Native!

## Section List props

---

### SectionSeparatorComponent

Component rendered between two sections

---

### renderSectionHeader

callback function that is similar to renderItem in terms of arguments, but will return react element which will be rendered at the top of each section

---

### sections

array of sections with data

## Flat List props

---

### ItemSeparatorComponent

Rendered in between each item, but not at the top or bottom

---

### ListFooterComponent

Rendered at the bottom of all items

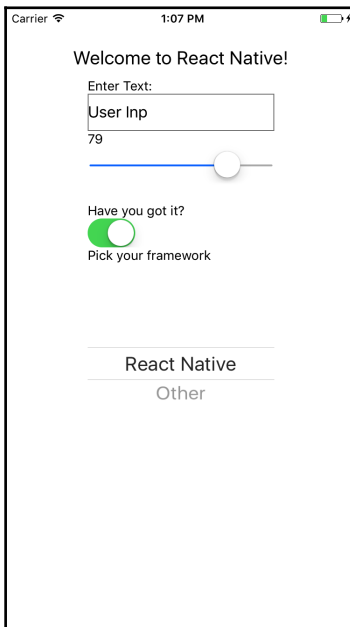
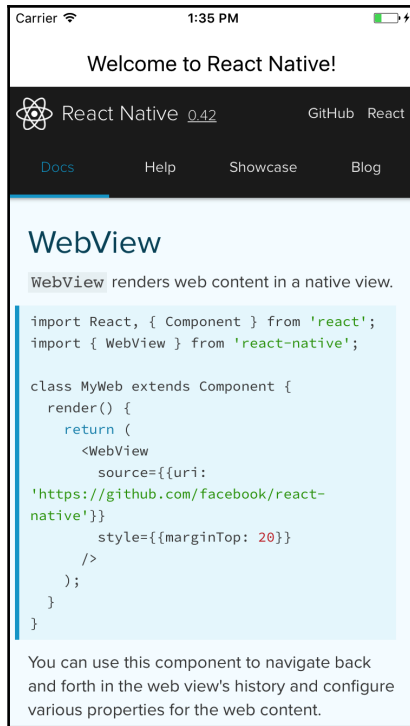
---

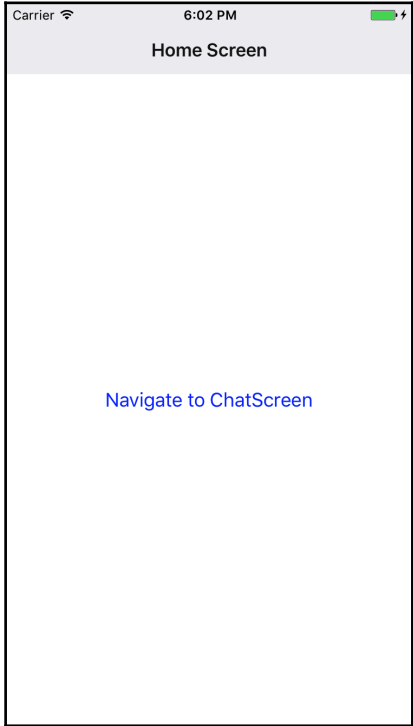
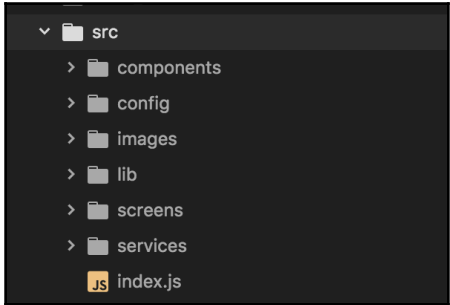
### ListHeaderComponent

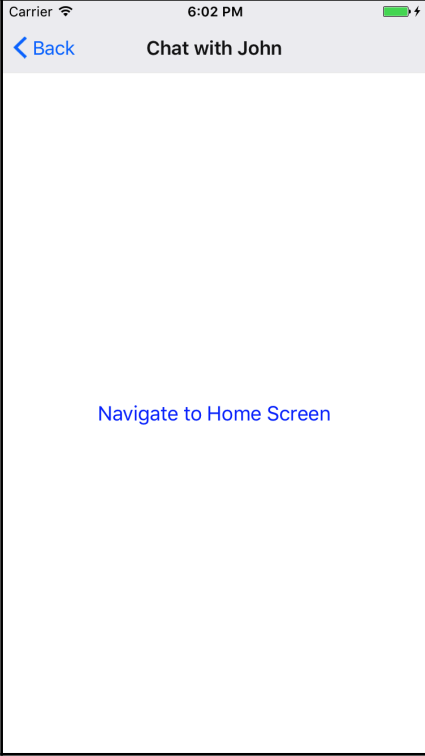
Rendered at the top of all the items

---

### columnWrapperStyle

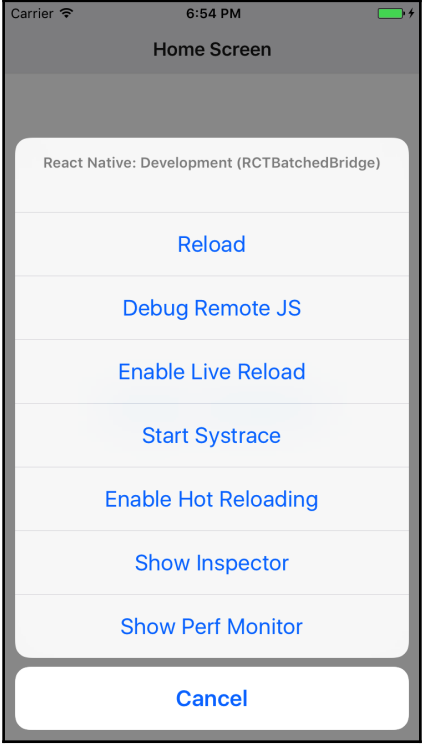


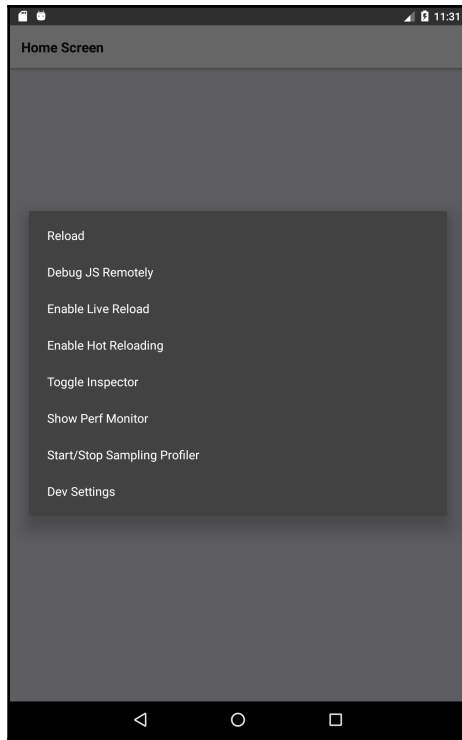


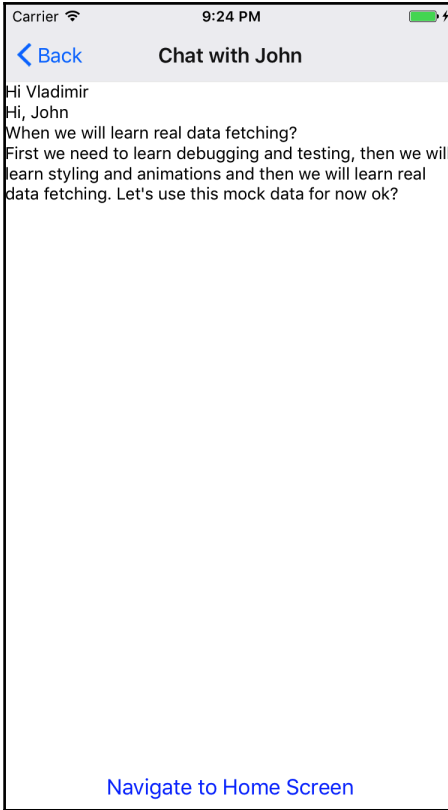


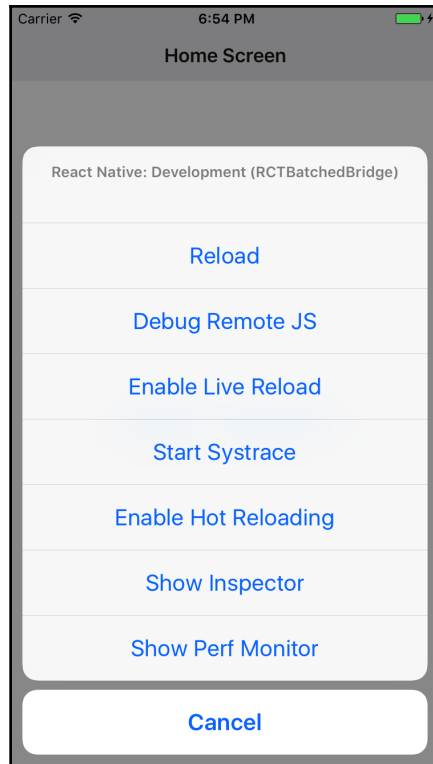


# Chapter 4: Debugging and Testing React Native







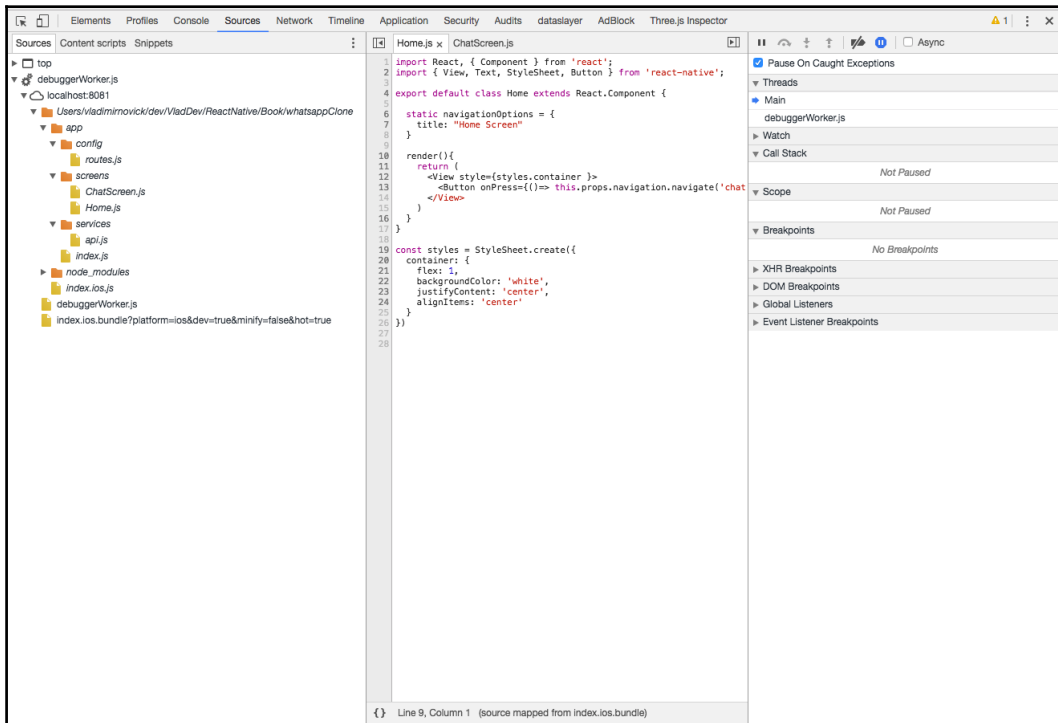
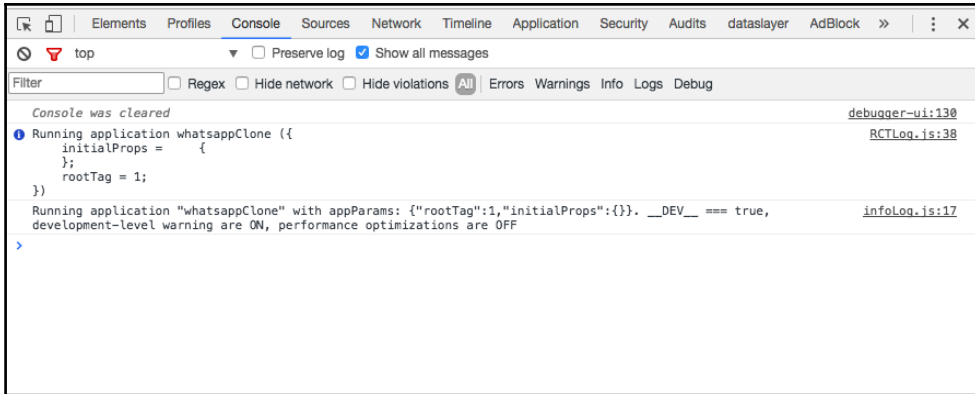


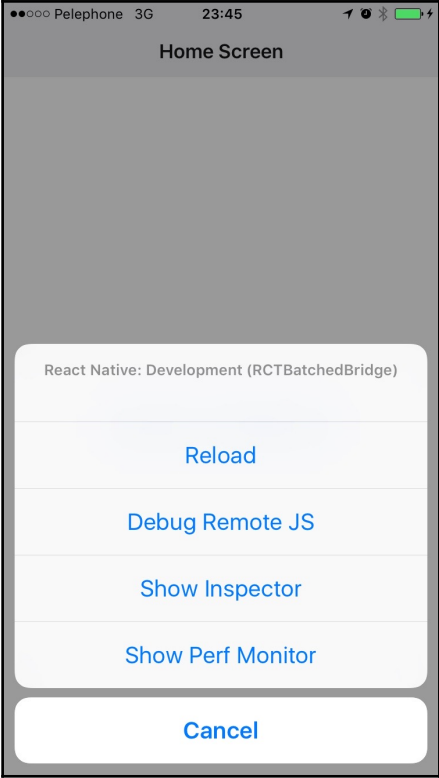
Dark background

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 #13679 active.





React Native: Development (RCTBatchedBridge)

Reload

Debug Remote JS

Show Inspector

Show Perf Monitor

Cancel

Could not connect to development server.

Ensure the following:

- Node server is running and available on the same network - run 'npm start' from reactive root
- Node server URL is correctly set in AppDelegate

URL: <http://localhost:8081/index.ios.bundle?platform=ios&dev=true&minify=false>

RCTFatal

```
-[RCTBatchedBridge stopLoadingWithError:
]
__25-[RCTBatchedBridge start]_block_invo
ke_2
_dispatch_call_block_and_release
_dispatch_client_callout
_dispatch_main_queue_callback_4CF
__CFRUNLOOP_IS_SERVICING_THE_MAIN_DISPAT
CH_QUEUE__
```

Dismiss (ESC)    Reload JS (⌘R)    Copy (⌘C)

```
Unable to resolve module `react-navigation`
from `/Users/vladimirnovick/dev/VladDev/
ReactNative/Book/whatsappClone/app/
index.js`: Module does not exist in the
module map or in these directories:
/Users/vladimirnovick/dev/VladDev/
ReactNative/Book/whatsappClone/
node_modules
```

This might be related to <https://github.com/facebook/react-native/issues/4968>

To resolve try the following:

1. Clear watchman watches: `watchman watch-del-all``.
2. Delete the `node_modules`` folder: `rm -rf node_modules && npm install``.
3. Reset packager cache: `rm -fr $TMPDIR/react-*`` or `npm start --reset-cache``.

```
RCTFatal
```

```
-[RCTBatchedBridge stopLoadingWithError:
]
```

```
__25-[RCTBatchedBridge start]_block_invo
ke_2
```

```
_dispatch_call_block_and_release
```

```
-----
```

```
Dismiss (ESC) Reload JS (⌘R) Copy (⌘C)
```



console.error: "Manually thrown error"

Object.console.error  
YellowBox.js:62:10

ChatScreen.componentDidMount  
ChatScreen.js:17:12

ChatScreen.proxiedComponentDidMount  
createPrototypeProxy.js:61:39

<unknown>  
ReactCompositeComponent.js:362:23

measureLifecyclePerf  
ReactCompositeComponent.js:64:11

<unknown>  
ReactCompositeComponent.js:361:10

CallbackQueue.notifyAll  
CallbackQueue.js:75:21

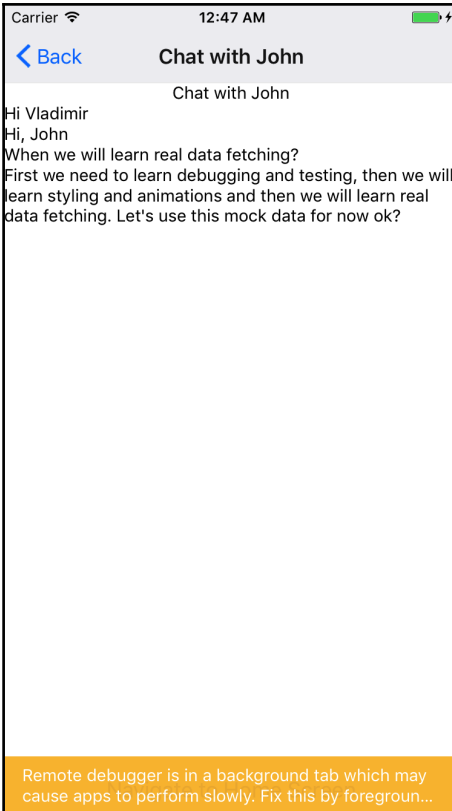
ReactNativeReconcileTransaction.close  
ReactNativeReconcileTransaction.js:36:25

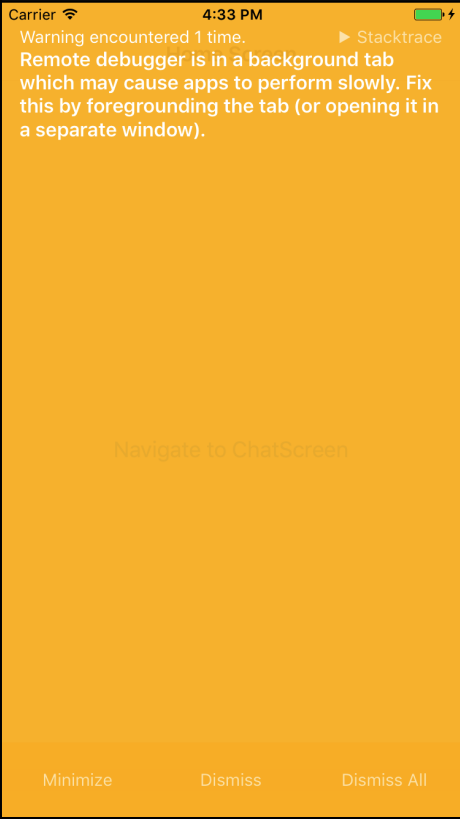
ReactNativeReconcileTransaction.closeAll  
Transaction.js:222:24

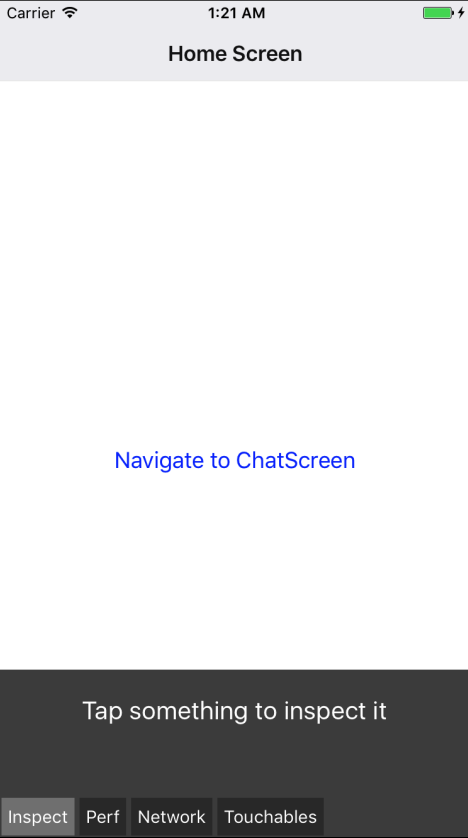
Dismiss (ESC)

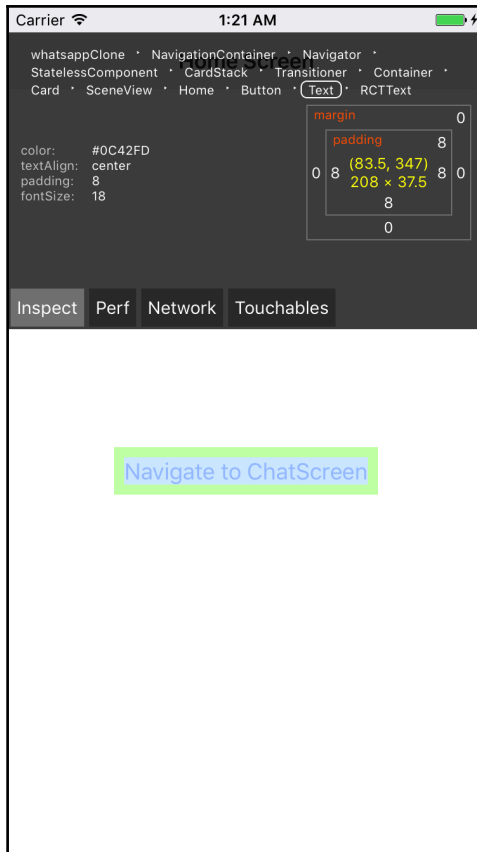
Reload JS (%R)

Copy (~C)









Trace React Updates
  Highlight Search
  Use Regular Expressions

(<sr in the console)

```

          <View style=3>
            <RCTView style=3>
              <Button onPress=onPress() title="Navigate to ChatScreen">
                <TouchableOpacity accessibilityComponentType="button" access
                <AnimatedComponent accessible=true accessibilityComponentT
                <View ref=bound_setComponentRef() accessible=true access
                <RCTView accessible=true accessibilityComponentType="bu
                <View style=[46]>
                  <RCTView style=[46]>
                    <Text style=[47] accessible=true allowFontScaling=
                    </RCTView>
                  </View>
                </RCTView>
              </View>
            </RCTView>
          </View>
        
```

AppComponent View RCTView View RCTView whatsappClone NavigationContainer Navigator Unknown  
 CardStack Transitioner View RCTView View RCTView View RCTView Container Card  
 AnimatedComponent View RCTView SceneView Home View RCTView Button TouchableOpacity  
 AnimatedComponent View RCTView View RCTView **Text**

Search by Component Name

**<Text>** (<sr in the console)

**Props**

- accessible: true
- allowFontScaling: true
- children: "Navigate to ChatScreen"
- ellipsizeMode: "tail"
- style: Array[1]

**State**

- isHighlighted: false
- touchable: {...}

**Context**

Empty object

**React Native Style Editor**

color	: #0C42FD
textAlign	: center
padding	: 8
fontSize	: 18
	:

React Developer Tools

Highlight Updates Highlight Search Search (text or /regex/)

```

    <View onStartShouldSetResponder=onStartShouldSetResponder() onMoveShouldSet...
      <RCTView onStartShouldSetResponder=onStartShouldSetResponder() onMoveShoul...
        <View style=21>
          <RCTView style=21>
            <Container key="card_scene_init-id-1502285923297-0" mode="card" route=
              <Card mode="card" router={getComponentForState: getComponentForState
                <AnimatedComponent ref=bound_onComponentRef() pointerEvents="none"
                  <View ref=bound_setComponentRef() pointerEvents="none" style=ba
                    <RCTView pointerEvents="none" style=(backgroundColor: "#E9E9EF"
                      </View>
                    </AnimatedComponent>
                  </Container>
                <Container key="card_scene_init-id-1502285923297-1" mode="card" router={get
                  <Card mode="card" router={getComponentForState: getComponentForState
                    <AnimatedComponent ref=bound_onComponentRef() pointerEvents="auto
                      <View ref=bound_setComponentRef() pointerEvents="auto" style=ba
                        <RCTView pointerEvents="auto" style=(backgroundColor: "#E9E9EF"
                          <SceneView navigation={dispatch: fn(), state: {}, goBack: go
                            <Home navigation={dispatch: fn(), state: {}, goBack: goBack
                              <View style=4>
                                <RCTView style=4>
                                  <View...</View>
                                  <FlatList data={[,], [,], [,], [,]} renderItem=renderItem
                                    <VirtualizedList ref=fn() data={[,], [,], [,], [,]} rende
                                      <ScrollView ref=fn() data={[,], [,], [,], [,]} rende
                                        <RCTScrollView ref=bound_setScrollViewRef() data=[
                                          <RCTScrollContentView ref=bound_setInnerViewRef
                                            <CellRenderer key="message-0" ref=ref() cellKey=
                                              <View onLayout=onLayout() style=null>
                                                <RCTView onLayout=onLayout() style=null>
                                                  <View>
                                                    <RCTView>
                                                      <Text accessible=true allowFontScaling=t
                                                        </RCTView>
                                                    </RCTView>
                                                  </View>
                                                </RCTView>
                                              </View>
                                            </CellRenderer>
                                          <CellRenderer key="message-1" ref=ref() cellKey=
                                            <View onLayout=onLayout() style=null>
                                              <RCTView onLayout=onLayout() style=null>
                                                <View>
                                                  <RCTView>
                                                    <Text accessible=true allowFontScaling=t
                                                      </RCTView>
                                                  </RCTView>
                                                </View>
                                              </CellRenderer>
                                            <CellRenderer key="message-2" ref=ref() cellKey=
                                              <View onLayout=onLayout() style=null>
                                                <RCTView onLayout=onLayout() style=null>
                                                  <View>
                                                    <RCTView>
                                                      <Text accessible=true allowFontScaling=t
                                                        </RCTView>
                                                    </RCTView>
                                                  </View>
                                                </CellRenderer>
                                              </View>
                                            </CellRenderer>
                                          <View onLayout=onLayout() style=null>
                                            <RCTView onLayout=onLayout() style=null>
                                              <View>
                                                <RCTView>
                                                  <Text accessible=true allowFontScaling=t
                                                    </RCTView>
                                                </View>
                                              </View>
                                            </View>
                                          </CellRenderer>
                                        </View>
                                      </View>
                                    </VirtualizedList>
                                  </FlatList>
                                </View>
                              </View>
                            </View>
                          </View>
                        </View>
                      </View>
                    </View>
                  </View>
                </View>
              </View>
            </View>
          </View>
        </View>
      </View>
    </View>
  
```

Props

- accessible: true
- allowFontScaling: true
- children: "Hi, John"
- disabled: false
- ellipsizeMode: "tail"

State

- isHighlighted: false
- touchable: {}

Context

- Empty object
- No style

AppContainer View RCTView View RCTView NavigationContainer Navigator Unknown

CardStackTransitioner Transitioner View RCTView CardStack View RCTView View

RCTView Container Card AnimatedComponent View RCTView SceneView Home View

RCTView FlatList VirtualizedList ScrollView RCTScrollContentView RCTScrollContentView CellRenderer

/Users/vladimirnovick/dev/Book/learning-react-native/chapters/whatsappClone/scr/screens/ChatScreen.js:33

Carrier 4:40 PM

Back Chat with John

Chat with John

Hi Vladimir

Hi, John

When we will learn real data fetching  
First we need to learn debugging and testing, then we will learn styling and animations and then we will learn real data fetching. Let's use this mock data for now ok?

Inspect Perf Network Touchables

Carrier 1:09 AM

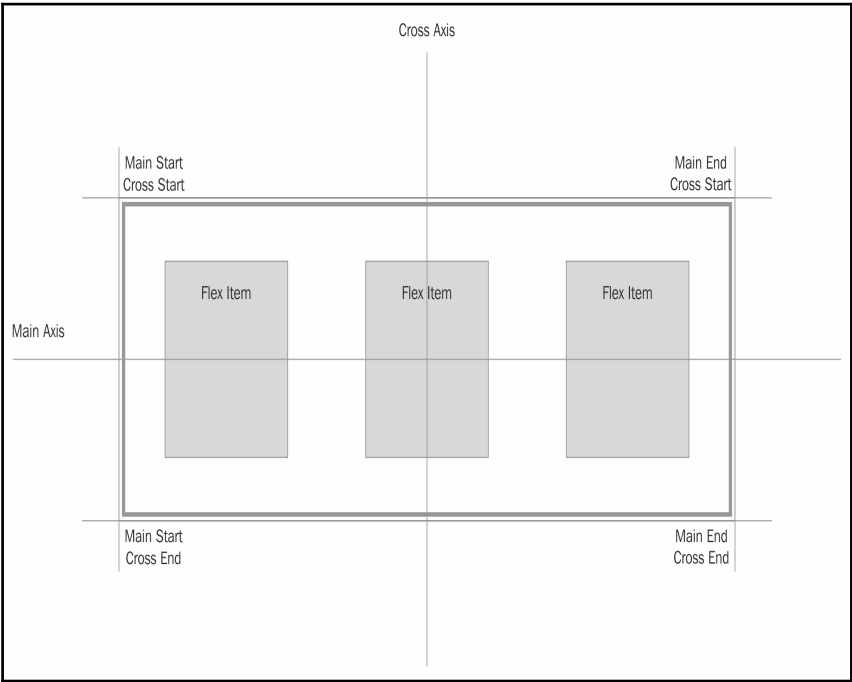
RAM	JSC	Views	UI	JS
85.23	0.00	22	60	60
MB	MB	25		

ScriptDownload: 82ms  
ScriptExecution: 0ms  
RAMBundleLoad: 0ms  
RAMStartupCodeSize: 0b  
RAMStartupNativeRequires: 0ms  
RAMStartupNativeRequiresCount: 0  
RAMNativeRequires: 0ms  
RAMNativeRequiresCount: 0  
NativeModuleInit: 0ms  
NativeModuleMainThread: 3ms

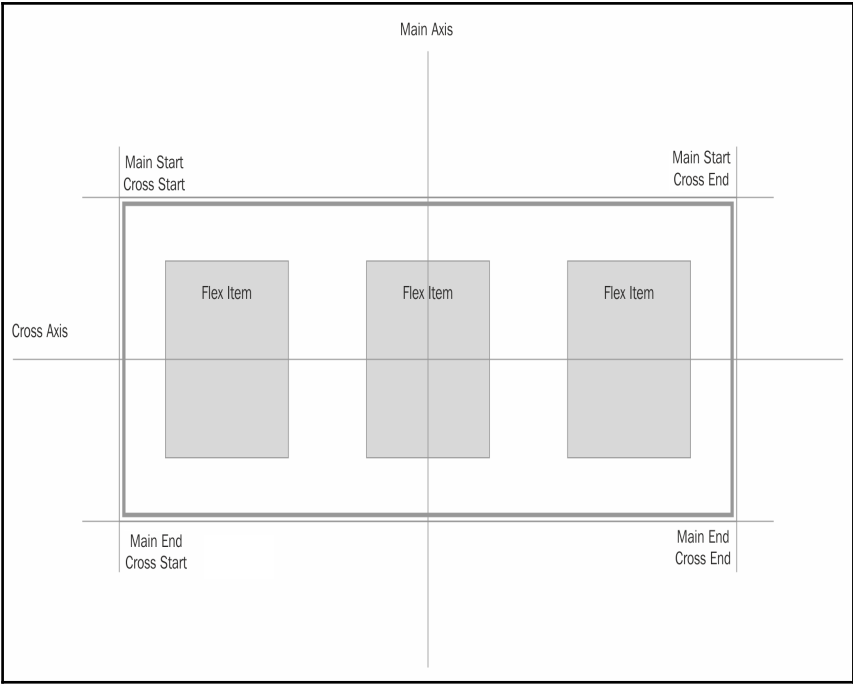
[Navigate to ChatScreen](#)

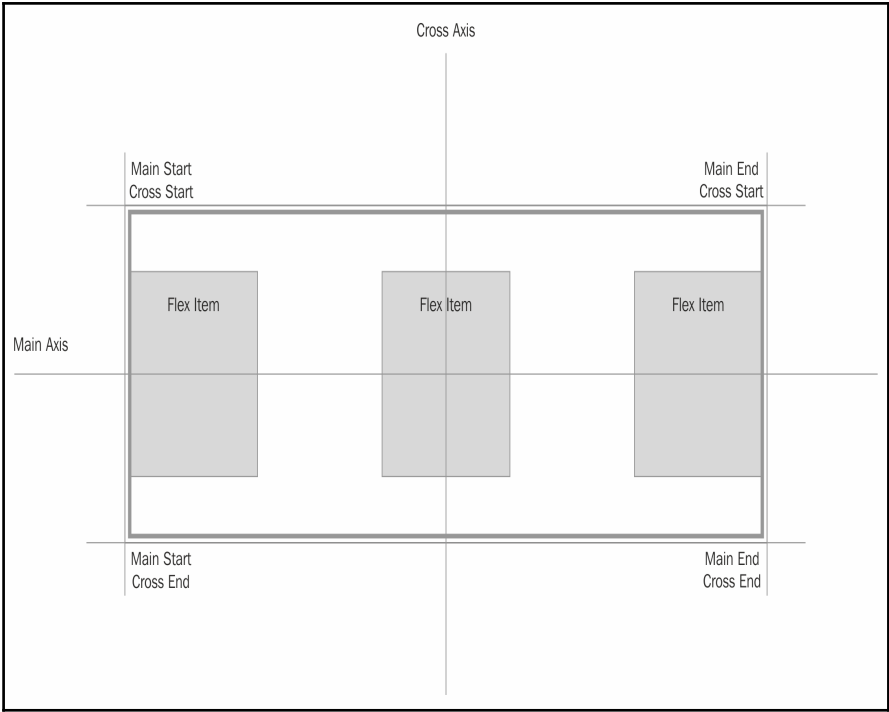
Remote debugger is in a background tab which may cause apps to perform slowly. Fix this by foreground...

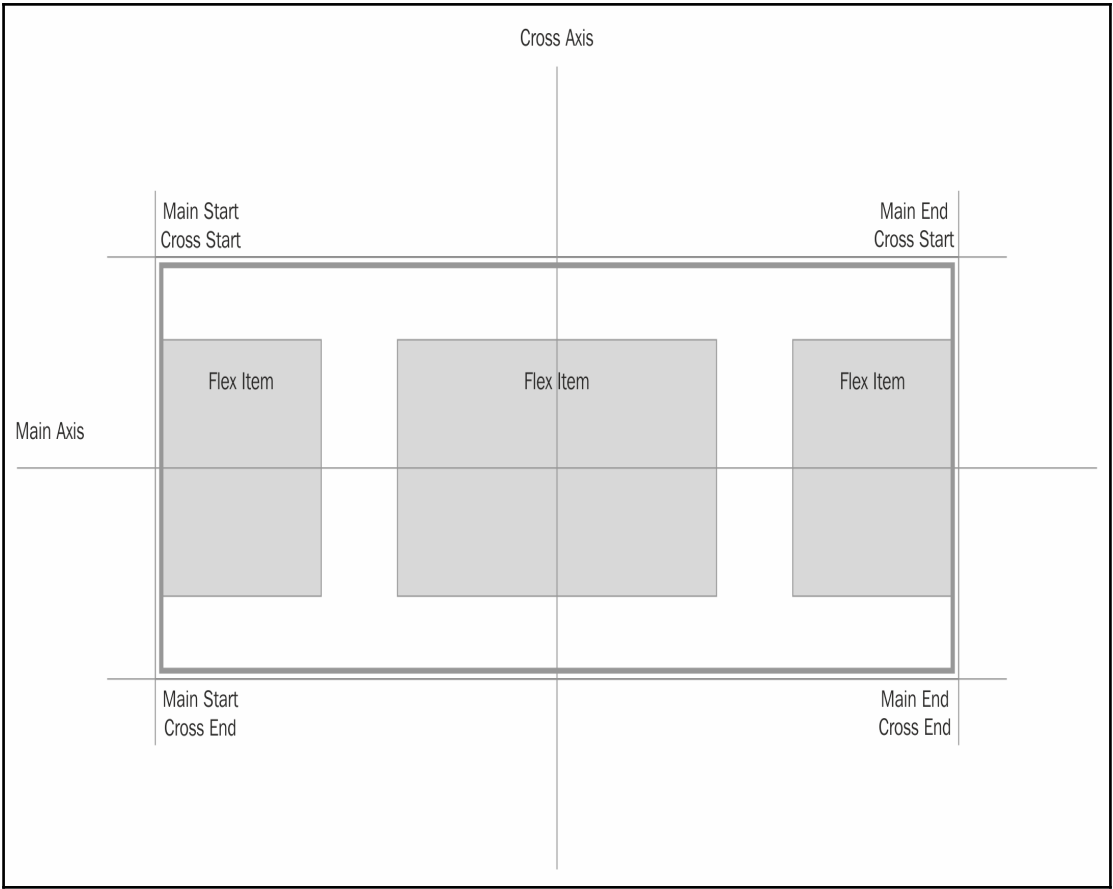
# Chapter 5: Bringing the Power of Flexbox to the Native World











JSON value '2%' of type NSString cannot be converted to NSNumber

```
+ [RCTConvert NSNumber:]  
RCTConvert.m:59
```

```
+ [RCTConvert double:]
```

```
+ [RCTConvert CGFloat:]
```

```
- [RCTViewManager set_borderRadius:forView:  
withDefaultView:]
```

```
- [RCTComponentData callCustomSetter: onView:  
withProp:isShadowView:]
```

```
__49-[RCTComponentData createPropBlock:isShadowView:]_block_invoke_2
```

```
__49-[RCTComponentData propBlockForKey:isShadowView:]_block_invoke_2
```

```
RCTPerformBlockWithLogFunction
```

```
RCTPerformBlockWithLogPrefix
```

```
__49-[RCTComponentData propBlockForKey:isShadowView:]_block_invoke
```

```
__37-[RCTComponentData setProps:forView:
```

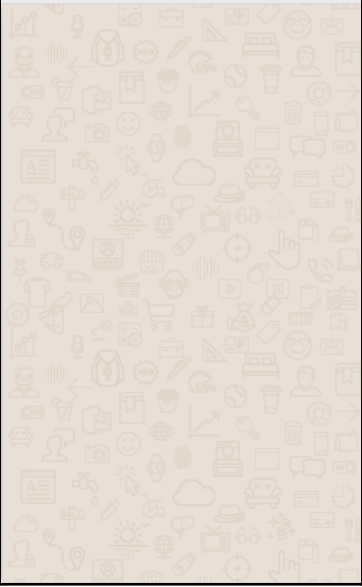
Dismiss (ESC)

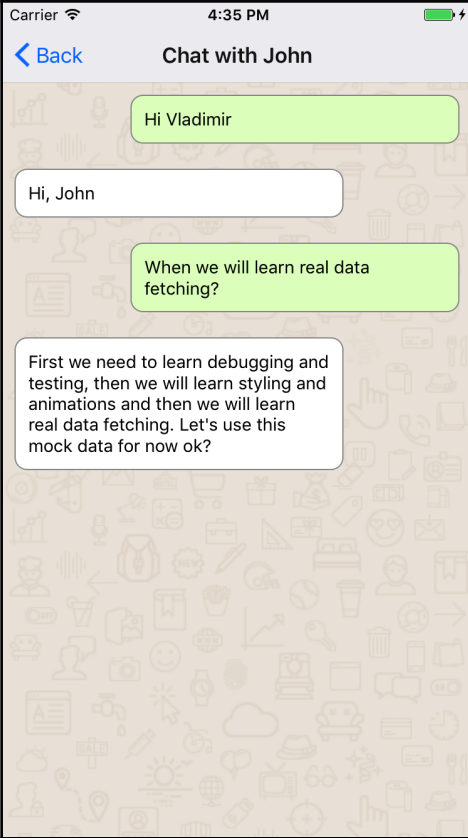
Reload JS (⌘R)

Copy (⌘C)

[← Back](#)

Chat with John





Carrier 4:35 PM

< Back

Chat with John

Hi Vladimir

Hi, John

When we will learn real data fetching?

First we need to learn debugging and testing, then we will learn styling and animations and then we will learn real data fetching. Let's use this mock data for now ok?

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