

Main Points/Key Points	Notes
	<p style="text-align: center;"><b>Introducing React Native</b></p> <ol style="list-style-type: none"> <li>1. <b>What is React Native?</b> <ol style="list-style-type: none"> <li>a. It is a framework to build native mobile application in JavaScript by using React JavaScript library.</li> <li>b. It is open sourced by Facebook and backed by large community.</li> <li>c. Mobile apps developed using React Native are Instagram, Uber, Walmart, Amazon, and Soundcloud.</li> <li>d. React Native is half-hybrid and half-native.</li> <li>e. It is built using JavaScript and JSX.</li> </ol> </li> <li>2. <b>Native vs. Without Native Code</b> <ol style="list-style-type: none"> <li>i. <b>Native</b> <ol style="list-style-type: none"> <li>1. React Native code is converted to the native language of each platform (Android-Java, iOS-Objective-C). Refer to the created android and ios folders.</li> <li>2. Developer would be able to continue React Native project in Native Language of each platform (Android - Android Studio, iOS - Xcode)</li> <li>3. Developer would be able to configure Native settings such as App Icon, Splash Screen, App deployment to the actual device.</li> <li>4. Developer would be able to utilize a large number of supported and new APIs.</li> </ol> </li> </ol> </li> </ol>
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	<div>Introducing React Native</div> <div><div>ii. Without Native Code</div><div><div>1. React Native code is retained in its original form for rendering.</div><div>2. Developer is required to use the defined APIs set by Expo (Limited).</div><div>3. Not all UI toolkits support Expo.</div><div>4. Developer is required to install an Expo client app to render the developed react native code.</div><div>5. Developer would be able to use snack.expo.io online code editor.</div></div></div> <div>3. React Native Development Tools.</div> <div><table><tr><th>Required Software</th></tr><tr><td><div><div>1. Node.js (version 8).</div><div>2. Python2.</div><div>3. Yarn.</div><div>4. JDK 1.8 or latest.</div></div></td></tr><tr><th>Native Code</th></tr><tr><td><div><div>1. Android Studio (Android SDK).</div><div>2. Xcode (iOS SDK).</div></div></td></tr><tr><th>Without Native Code</th></tr><tr><td><div><div>a. Expo App (expo.io).</div></div></td></tr></table></div>	Required Software	<div><div>1. Node.js (version 8).</div><div>2. Python2.</div><div>3. Yarn.</div><div>4. JDK 1.8 or latest.</div></div>	Native Code	<div><div>1. Android Studio (Android SDK).</div><div>2. Xcode (iOS SDK).</div></div>	Without Native Code	<div><div>a. Expo App (expo.io).</div></div>
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### Introducing React Native

#### 4. React Native Project Development.

##### Native Code

##### 1. Windows & Mac

```
react-native init HelloWorld
```

##### Without Native Code

##### 1. Windows & Mac

```
expo init HelloWorld
```

- a. The created React Native project located inside home folder.

##### Windows

```
C:/Users/<windows login>/HelloWorld
```

##### Mac

```
Macintosh HD/Users/<mac login>/HelloWorld
```

- b. Modify **App.js** file created inside **HelloWorld** folder using **Microsoft Visual Studio Code**. For Without Native Code approach you can use <http://snack.expo.io> online code editor.

## Summary

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	<div><div>Introducing React Native</div><div><div>5. A Basic React Native Component.</div><div><div>a. Components are the building blocks of React Native mobile application. There are exported classes for JavaScript.</div><div>b. There are two types of components:</div><div><div><div>Stateful</div><div><pre>class Greeting extends Component {   constructor(){     super();     this.state = { name: 'Chris' };   }   render(){     return(       &lt;SomeComponent /&gt;     );   } }</pre></div></div><div><div>Stateless</div><div><pre>const Greeting = () =&gt; (   &lt;SomeComponent /&gt; );</pre></div></div></div></div></div></div>
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	<div>Introducing React Native</div> <div>6. A Flow of a Basic React Native Component.</div> <div><div>React Native Component</div><pre>import React, {Component} from 'react'; import { <b>View</b>, <b>Text</b>, <b>StyleSheet</b> } from 'react-native';  class HelloWorld extends Component{    constructor () { <b>// A</b>     super()     this.state = {       name: 'React Native in Action'     }   }    componentDidMount () { <b>// C</b>     console.log('mounted..')   }    render () { <b>// B</b>     return (       &lt;View style={styles.container}&gt;         &lt;Text&gt;{this.state.name}&lt;/Text&gt;       &lt;/View&gt;     )   } }  const styles = StyleSheet.create({   container: {     marginTop: 100,     flex: 1 } })</pre></div>
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	7. Code Explanation.												
	<table><tr><td>View</td></tr><tr><td>The fundamental block for building React Native Application especially for the UI. (<code>&lt;div&gt;...&lt;/div&gt;</code>)</td></tr><tr><td>Text</td></tr><tr><td>The text element for React Native Application (<code>&lt;span&gt;...&lt;/span&gt;</code>).</td></tr><tr><td>StyleSheet</td></tr><tr><td>The styling element for React Native Application. Similar to CSS.</td></tr><tr><td>A</td></tr><tr><td>1. Set the state of the object with a variable <i>name</i> in the constructor. 2. Dynamic data must set as a state or props.</td></tr><tr><td>B</td></tr><tr><td>It will examine props and state, later combine components, styles and data to be rendered as the UI.</td></tr><tr><td>C</td></tr><tr><td><i>ComponentDidMount</i> is the last lifecycle of a React Native Class. Any APIs to be called will be placed in here.</td></tr></table>	View	The fundamental block for building React Native Application especially for the UI. ( <code>&lt;div&gt;...&lt;/div&gt;</code> )	Text	The text element for React Native Application ( <code>&lt;span&gt;...&lt;/span&gt;</code> ).	StyleSheet	The styling element for React Native Application. Similar to CSS.	A	1. Set the state of the object with a variable <i>name</i> in the constructor. 2. Dynamic data must set as a state or props.	B	It will examine props and state, later combine components, styles and data to be rendered as the UI.	C	<i>ComponentDidMount</i> is the last lifecycle of a React Native Class. Any APIs to be called will be placed in here.
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### Introducing React Native

#### 8. A Flow Diagram.

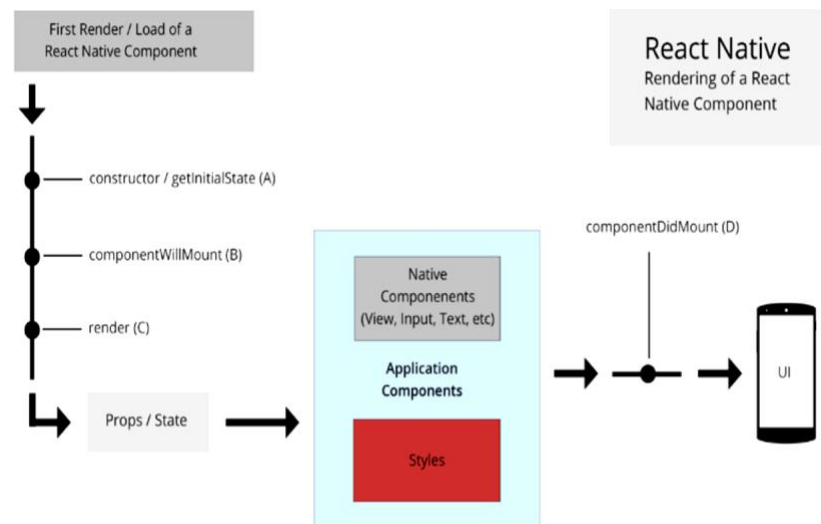


Figure 1. Rendering a Basic React Native Class.

Dabit, N. (2018). *React Native in Action*. New York, NY: Manning Publications Co.

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## Introducing React Native

### 9. JSX vs. HTML

JSX	HTML
<b>Text Component</b>	
<code>&lt;Text&gt;Hello&lt;/Text&gt;</code>	<code>&lt;span&gt;Hello&lt;/span&gt;</code>
<b>View Component</b>	
<code>&lt;View&gt; &lt;Text&gt;Hello 2&lt;/Text&gt; &lt;/View&gt;</code>	<code>&lt;div&gt; &lt;span&gt;Hello 2&lt;/span&gt; &lt;/div&gt;</code>
<b>Touchable highlight</b>	
<code>&lt;TouchableHighlight&gt; &lt;Text&gt;Hello 2 &lt;/Text&gt; &lt;/TouchableHighlight&gt;</code>	<code>&lt;button&gt; &lt;span&gt;Hello 2&lt;/span&gt; &lt;/button&gt;</code>

### 10. References

- Dabit, N. (2018). *React Native in Action*. New York, NY: Manning Publications Co.
- Abernathy, C. (2018). *React Native Tutorial: Building Android Apps with JavaScript*. Retrieved from <https://www.raywenderlich.com/247-react-native-tutorial-building-android-apps-with-javascript>
- Facebook Inc. React Native Reference, version 0.57. Available at <https://facebook.github.io/react-native/>

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