

MỤC TIÊU:

Kết thúc bài thực hành này bạn có khả năng

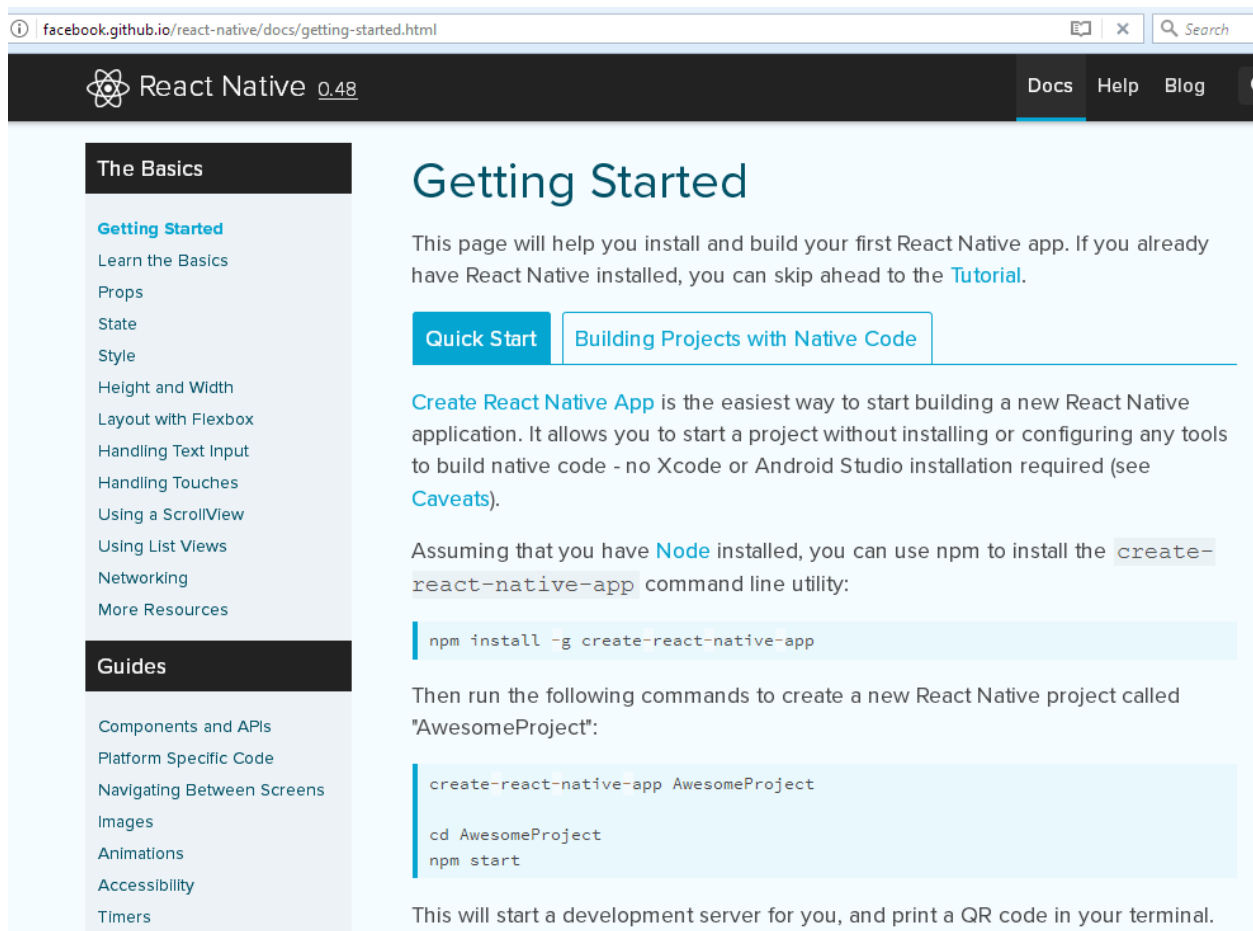
- Hướng dẫn cài đặt công cụ React Native trên Window và MacOS
- Hiểu chi tiết về cấu trúc ứng dụng React Native

PHẦN I: THIẾT LẬP MÔI TRƯỜNG

Bài 1 (2 điểm): Cài đặt React Native trên Window

B1 – Vào trang <http://facebook.github.io/react-native/>

Click Get-Start để xem hướng dẫn cài đặt



The screenshot shows the 'Getting Started' page of the React Native documentation. The page has a dark header with the React Native logo and version '0.48'. On the left, there is a sidebar with 'The Basics' and 'Guides' sections. The main content area is titled 'Getting Started' and contains instructions on how to install and build a first React Native app. It includes a 'Quick Start' button and a code block for installing the 'create-react-native-app' utility. Below the code block, it shows the commands to create a new project and start the development server.

facebook.github.io/react-native/docs/getting-started.html

React Native 0.48

Docs Help Blog

The Basics

- Getting Started
- Learn the Basics
- Props
- State
- Style
- Height and Width
- Layout with Flexbox
- Handling Text Input
- Handling Touches
- Using a ScrollView
- Using List Views
- Networking
- More Resources

Guides

- Components and APIs
- Platform Specific Code
- Navigating Between Screens
- Images
- Animations
- Accessibility
- Timers

Getting Started

This page will help you install and build your first React Native app. If you already have React Native installed, you can skip ahead to the [Tutorial](#).

[Quick Start](#) [Building Projects with Native Code](#)

[Create React Native App](#) is the easiest way to start building a new React Native application. It allows you to start a project without installing or configuring any tools to build native code - no Xcode or Android Studio installation required (see [Caveats](#)).

Assuming that you have [Node](#) installed, you can use npm to install the `create-react-native-app` command line utility:

```
npm install -g create-react-native-app
```

Then run the following commands to create a new React Native project called "AwesomeProject":

```
create-react-native-app AwesomeProject

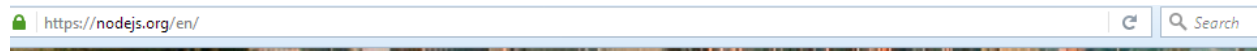
cd AwesomeProject
npm start
```

This will start a development server for you, and print a QR code in your terminal.

B2- Cài đặt NodeJS và Git

<https://nodejs.org/en/>

<https://git-scm.com/>

<https://www.sublimetext.com/3>


Node.js® is a JavaScript runtime built on **Chrome's V8 JavaScript engine**. Node.js has an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, **npm**, is the largest ecosystem of open source libraries in the world.

Important **security release** for 8.x, please update now!

Download for Windows (x64)

v6.11.3 LTS

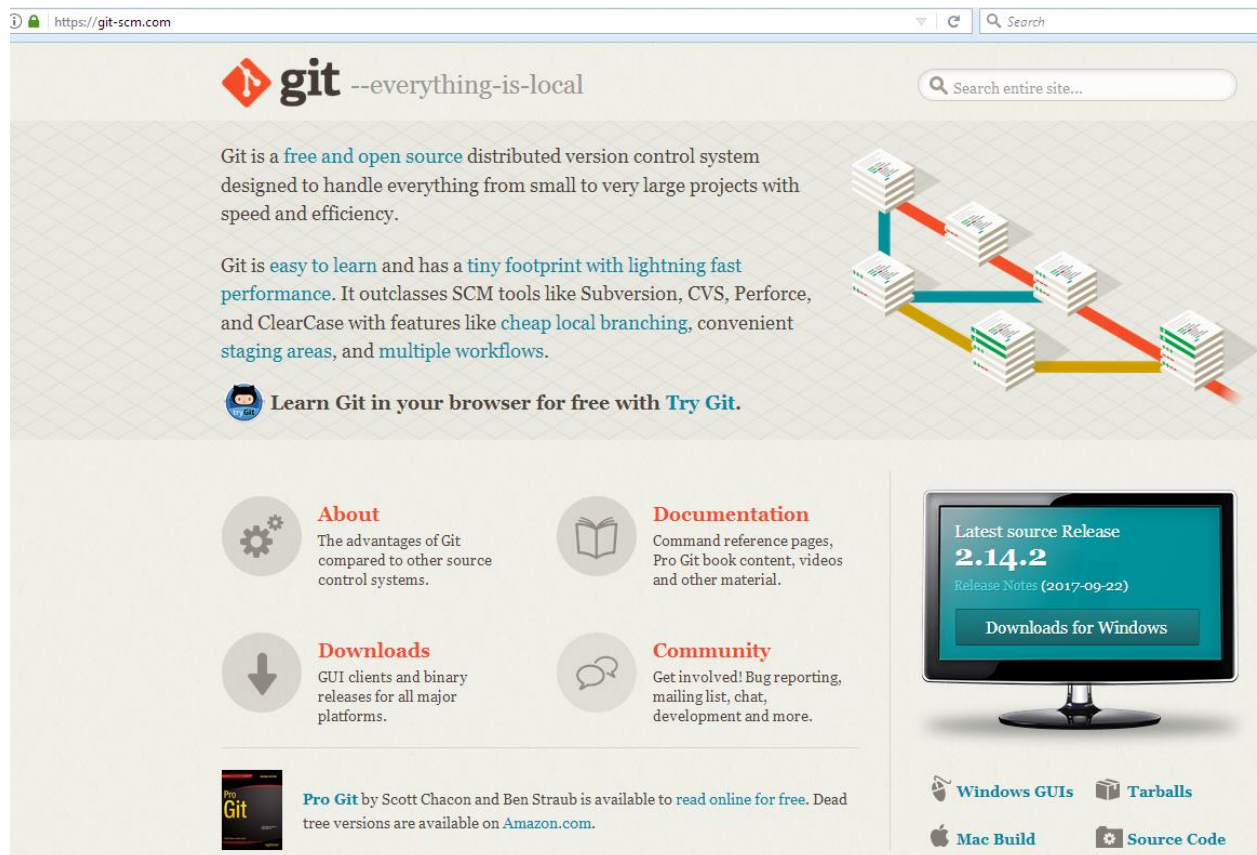
Recommended For Most Users

v8.6.0 Current

Latest Features

[Other Downloads](#) | [Changelog](#) | [API Docs](#) [Other Downloads](#) | [Changelog](#) | [API Docs](#)


Or have a look at the **LTS schedule**.



git --everything-is-local

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **easy to learn** and has a **tiny footprint with lightning fast performance**. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like **cheap local branching**, convenient staging areas, and **multiple workflows**.

 **Learn Git in your browser for free with Try Git.**


About
The advantages of Git compared to other source control systems.





Downloads
GUI clients and binary releases for all major platforms.

Documentation
Command reference pages, Pro Git book content, videos and other material.

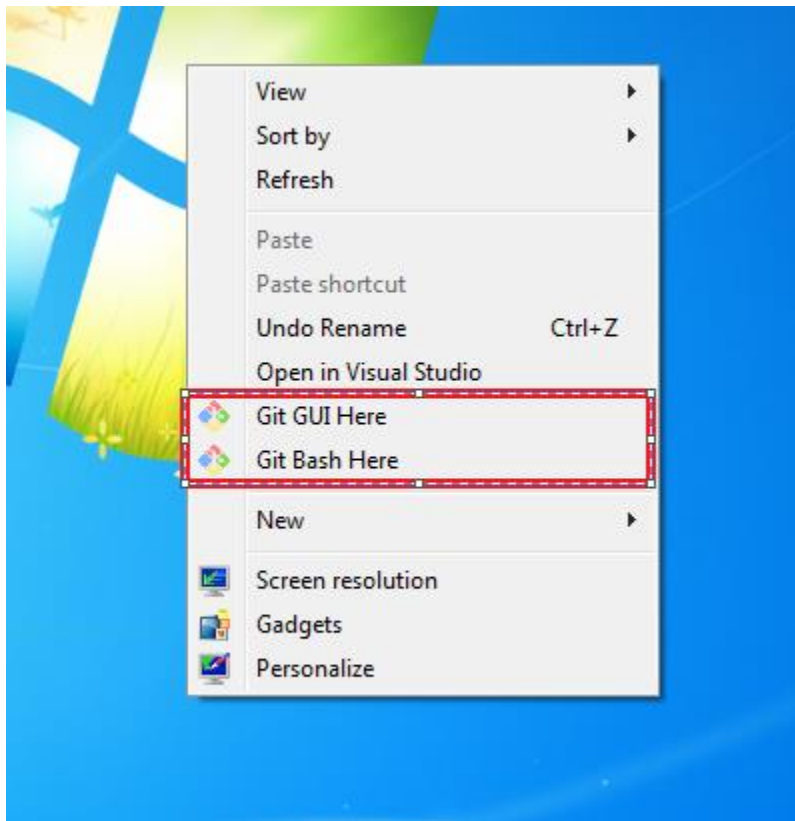
Community
Get involved! Bug reporting, mailing list, chat, development and more.

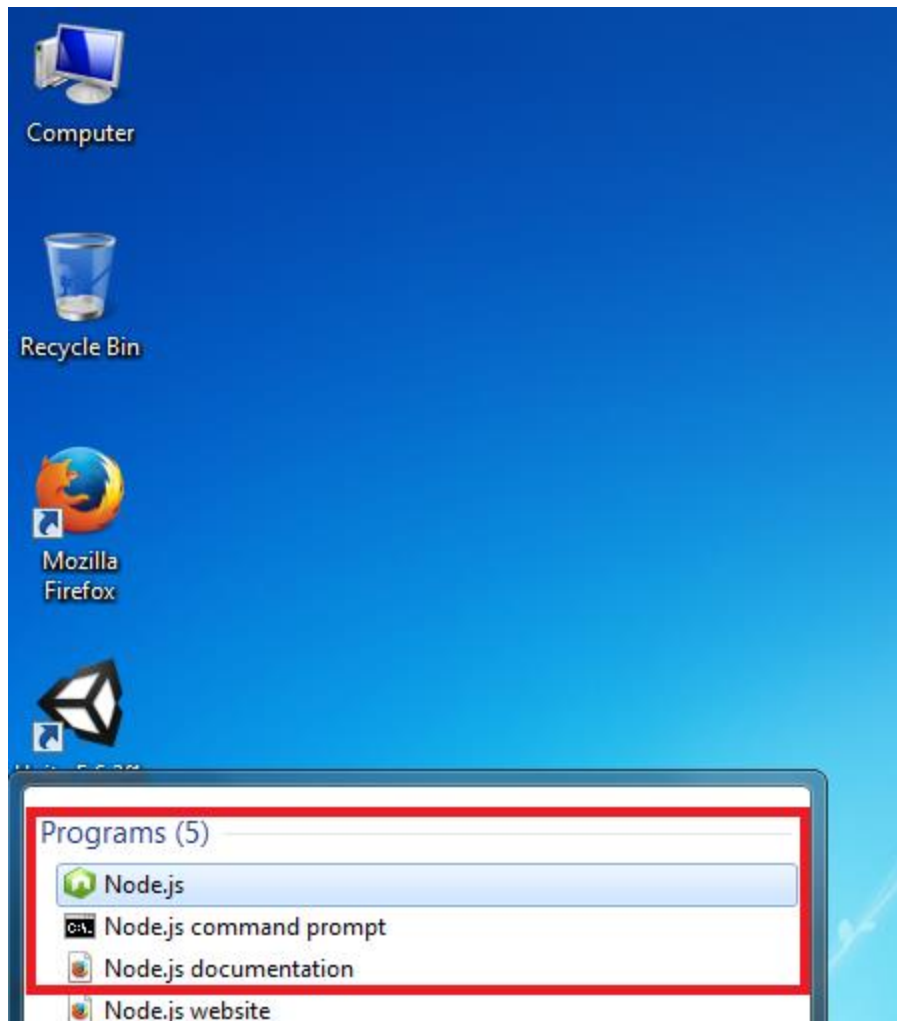
Latest source Release
2.14.2
[Release Notes \(2017-09-22\)](#)
[Downloads for Windows](#)

 **Pro Git** by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

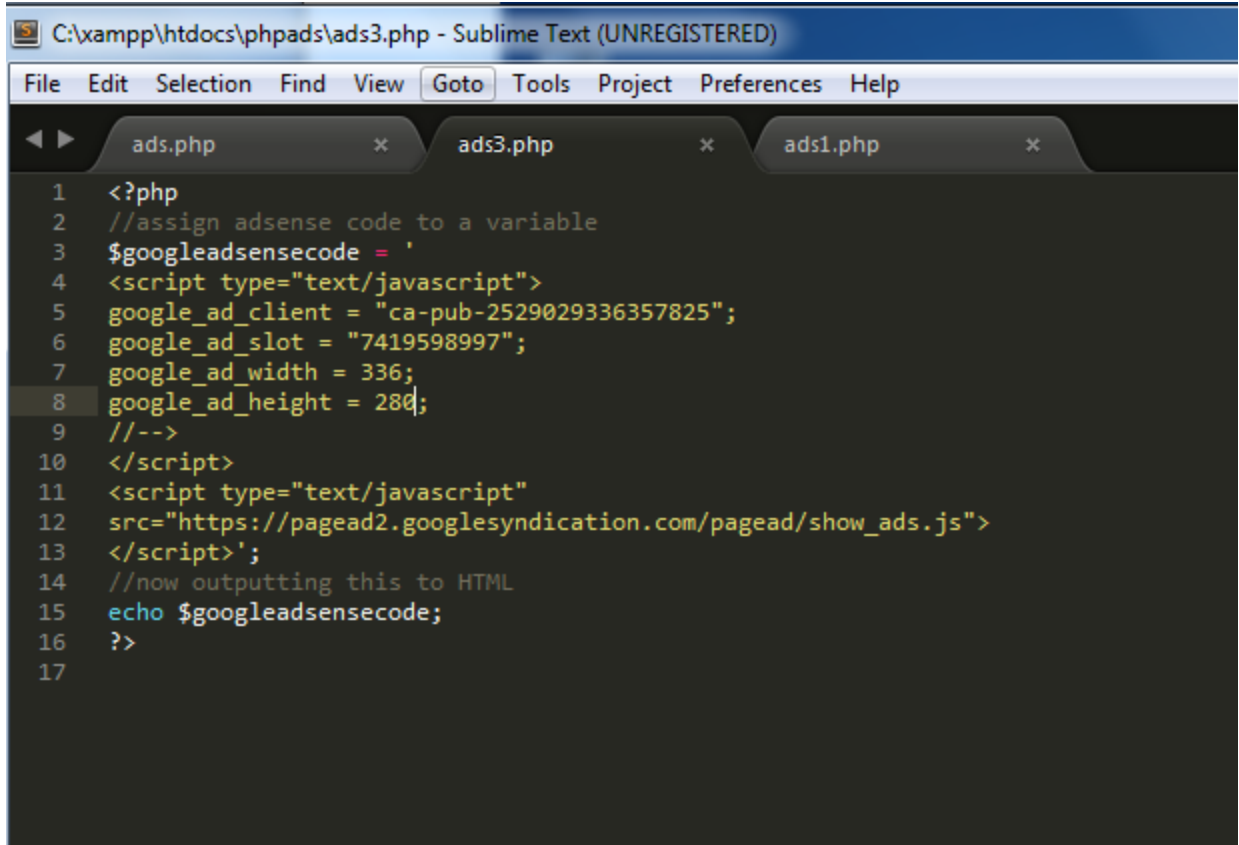
 **Windows GUIs**  **Tarballs**
 **Mac Build**  **Source Code**

Sau khi cài đặt, ta click phải chuột để kiểm tra trình Git bash đã được kích hoạt chưa (nếu chưa kích hoạt ta cần logout hoặc khởi động lại máy)





Download trình viết code Sublimetext



```

C:\xampp\htdocs\phpads\ads3.php - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

ads.php x ads3.php x ads1.php x

1 <?php
2 //assign adsense code to a variable
3 $googleadsensecode = '
4 <script type="text/javascript">
5 google_ad_client = "ca-pub-2529029336357825";
6 google_ad_slot = "7419598997";
7 google_ad_width = 336;
8 google_ad_height = 280;
9 //-->
10 </script>
11 <script type="text/javascript"
12 src="https://pagead2.googlesyndication.com/pagead/show_ads.js">
13 </script>';
14 //now outputting this to HTML
15 echo $googleadsensecode;
16 ?>
17
  
```

B3 – Cài Android SDK Tool (máy bạn nào đã cài Android Studio thì đã cài sẵn Android SDK tool)

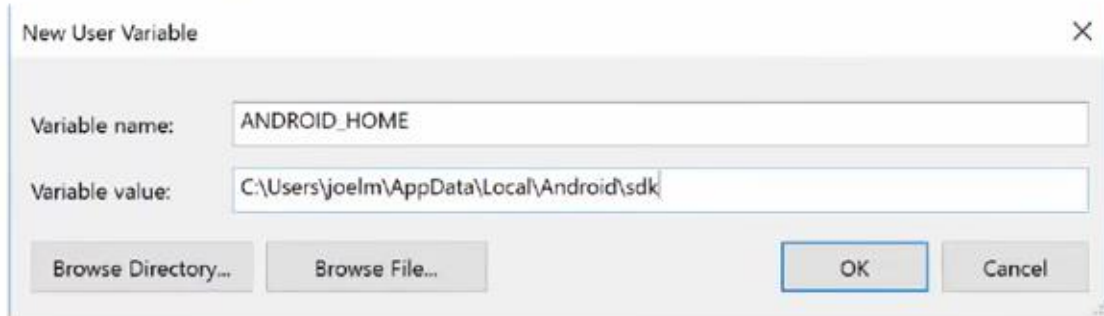
B4 – Cấu hình biến môi trường

ANDROID_HOME Environment Variable

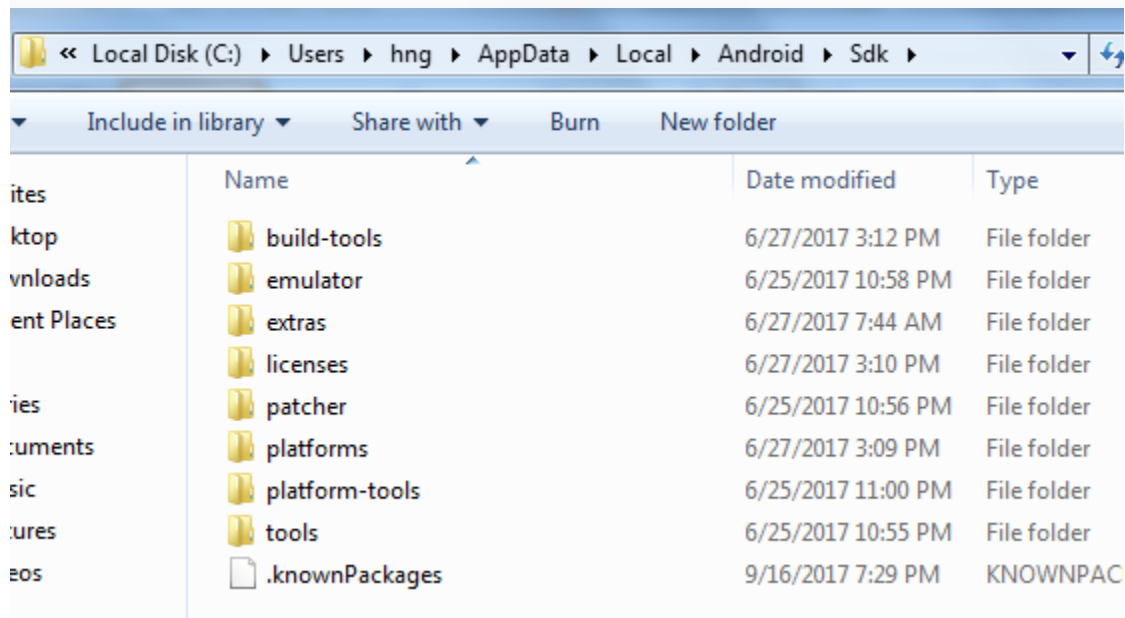
Ensure the `ANDROID_HOME` environment variable points to your existing Android SDK.

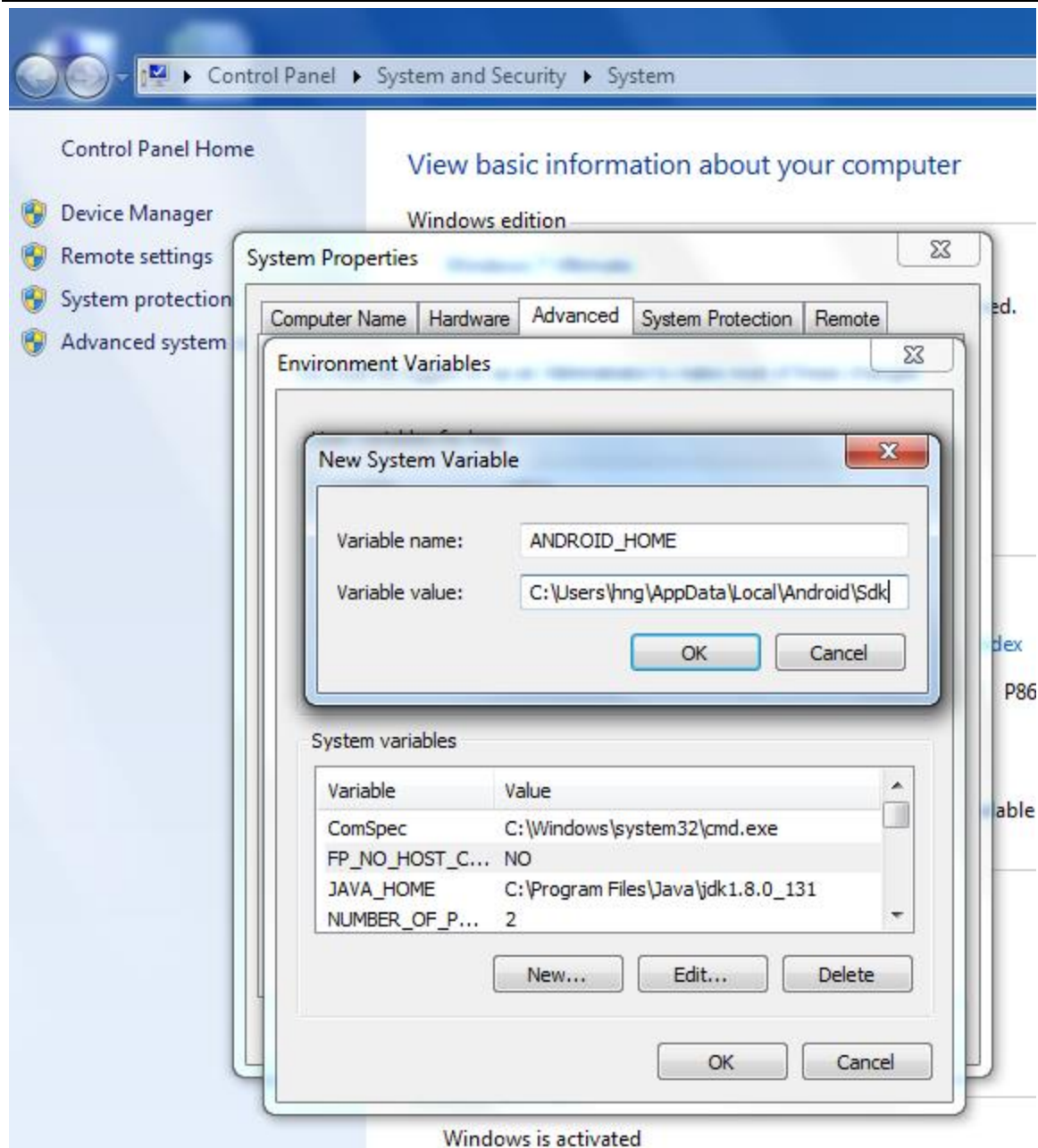
Go to Control Panel -> System and Security -> System -> Change settings -> Advanced System Settings -> Environment variables -> New

Your path to the SDK will vary to the one shown below.



You need to restart the Command Prompt (Windows) to apply the new environment variables.



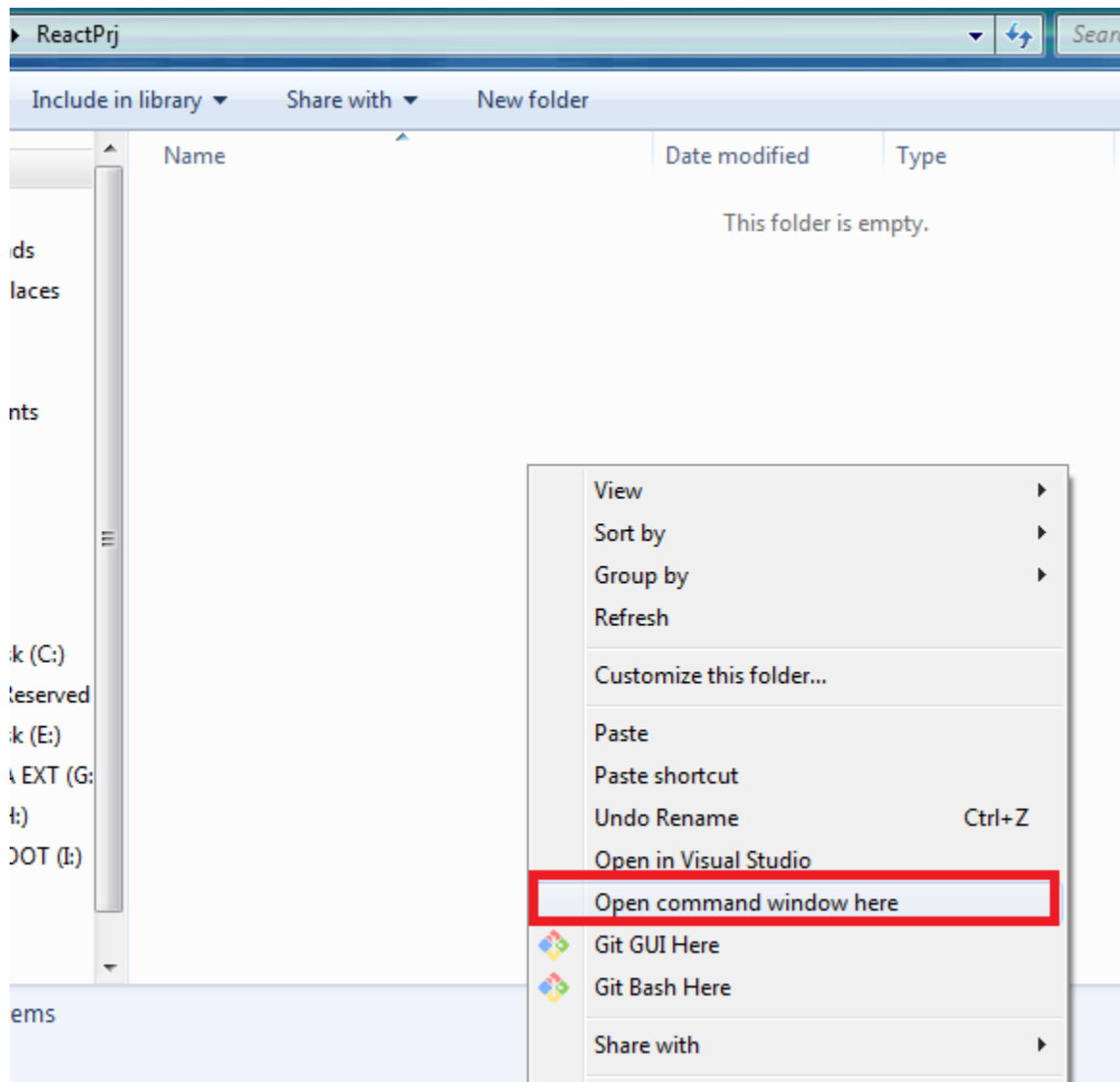


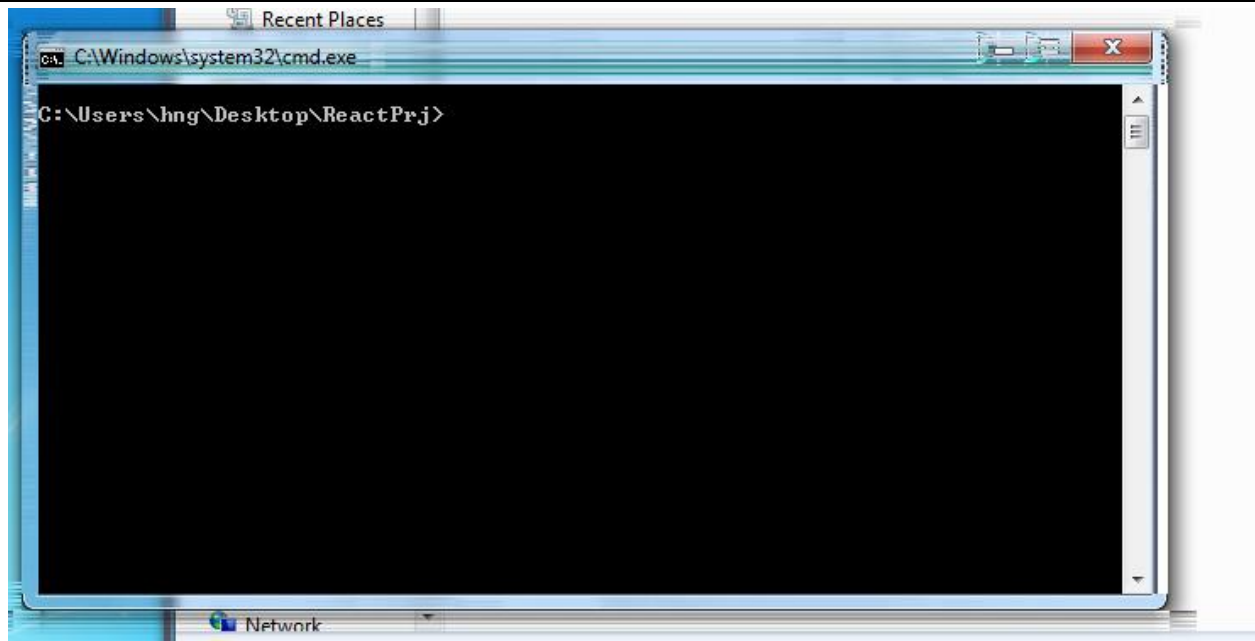
B5-Cài đặt máy ảo (có thể dung genymotion hoặc máy ảo trong android studio)

B6- Cài đặt React Native cho Command Line

Tạo thư mục Project (có thể tạo ở ngoài desktop hoặc bất kỳ chỗ nào khác)

Bạn mở thư mục , giữ phím SHIFT và nhấn phải chuột -> chọn “Open command window here”





Ta gõ câu lệnh:

Setup react native cho Command-Line:

npm install -g react-native-cli

B7 - Tạo dự án mới:

react-native init NameProject

```

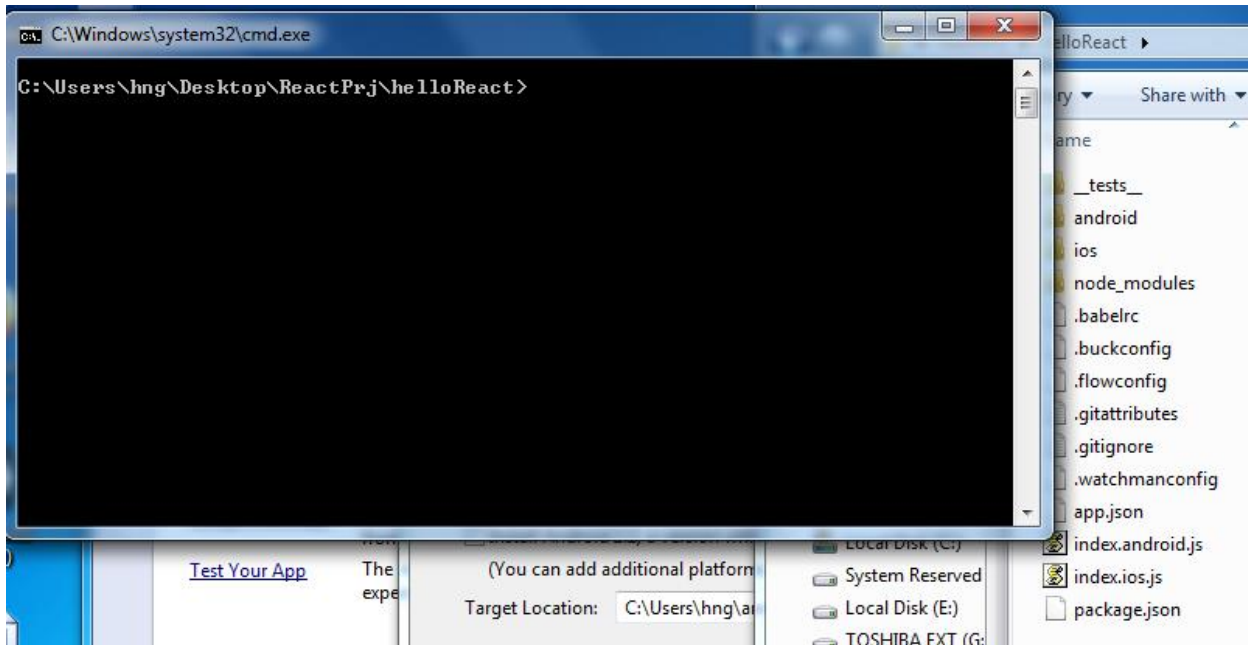
C:\Users\hng>npm
npm ERR! addLocal Could not install C:\Users\hng\Desktop\ReactPrj\~g
Terminate batch job (Y/N)? n

C:\Users\hng\Desktop\ReactPrj>npm install -g react-native-cli
C:\Users\hng\AppData\Roaming\npm\react-native -> C:\Users\hng\AppData\Roaming\node_modules\react-native-cli\index.js
C:\Users\hng\AppData\Roaming\npm
-- react-native-cli@2.0.1
+-- chalk@1.1.3
+-- ansi-styles@2.2.1
+-- escape-string-regexp@1.0.5
+-- has-ansi@2.0.0
+-- ansi-regex@2.1.1
+-- strip-ansi@3.0.1
+-- supports-color@2.0.0
+-- minimist@1.2.0
+-- prompt@0.2.14
+-- pkginfo@0.4.1
+-- read@1.0.7
+-- mute-stream@0.0.7
+-- revalidator@0.1.8
+-- utile@0.2.1
+-- async@0.2.10
+-- deep-equal@1.0.1
+-- i@0.3.5
+-- mkdirp@0.5.1
+-- minimist@0.0.8
+-- ncp@0.4.2
+-- rimraf@2.6.2
+-- glob@7.1.2
+-- fs.realpath@1.0.0
+-- inflight@1.0.6
+-- wrappy@1.0.2
+-- inherits@2.0.3
+-- minimatch@3.0.4
+-- brace-expansion@1.1.8
+-- balanced-match@1.0.0
+-- concat-map@0.0.1
+-- once@1.4.0
+-- path-is-absolute@1.0.1
+-- winston@0.8.3
+-- colors@0.6.2
+-- cycle@1.0.3
+-- eyes@0.1.8
+-- isstream@0.1.2
+-- pkginfo@0.3.1
+-- stack-trace@0.0.10
+-- semver@5.4.1

C:\Users\hng\Desktop\ReactPrj>react-native init helloReact
This will walk you through creating a new React Native project in C:\Users\hng\Desktop\ReactPrj\helloReact
'yarn' is not recognized as an internal or external command,
operable program or batch file.
Installing react-native...
Consider installing yarn to make this faster: https://yarnpkg.com
npm WARN deprecated connect@2.30.2: connect 2.x series is deprecated
[.....] / fetchMetadata: sill mapRegistry uri https://registry
  
```

B8

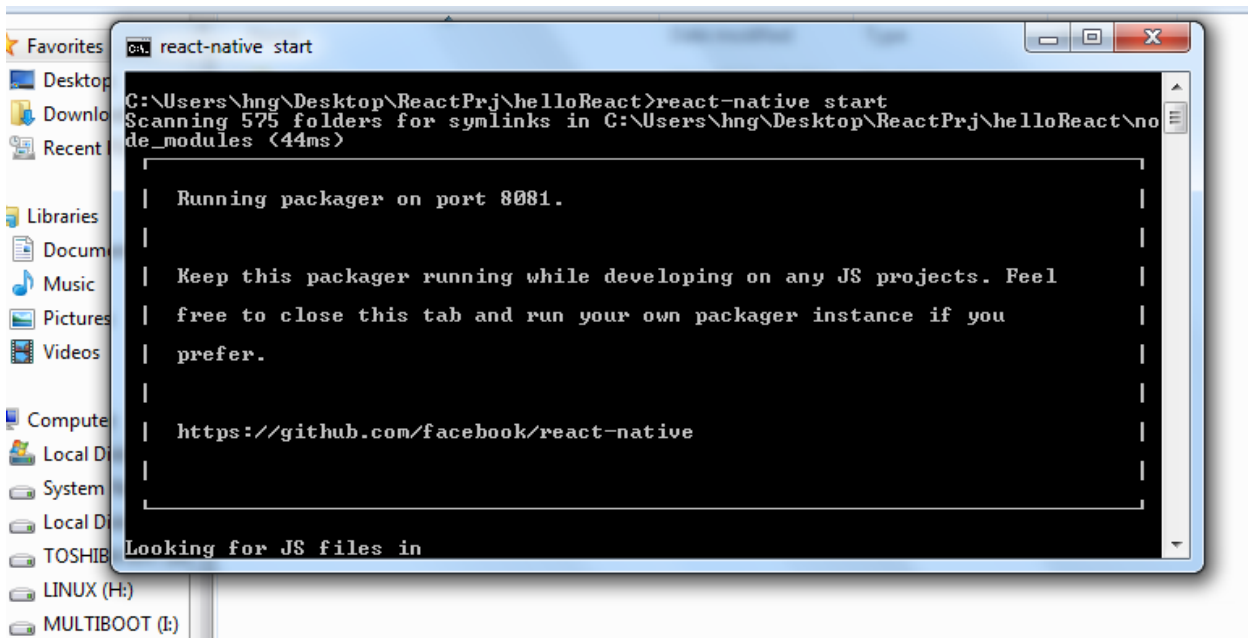
Sau khi tạo xong project, ta mở thư mục project và giữ SHIFT, nhấn phải chuột và chọn “Open command window here”



Tiếp theo ta Khởi tạo máy ảo

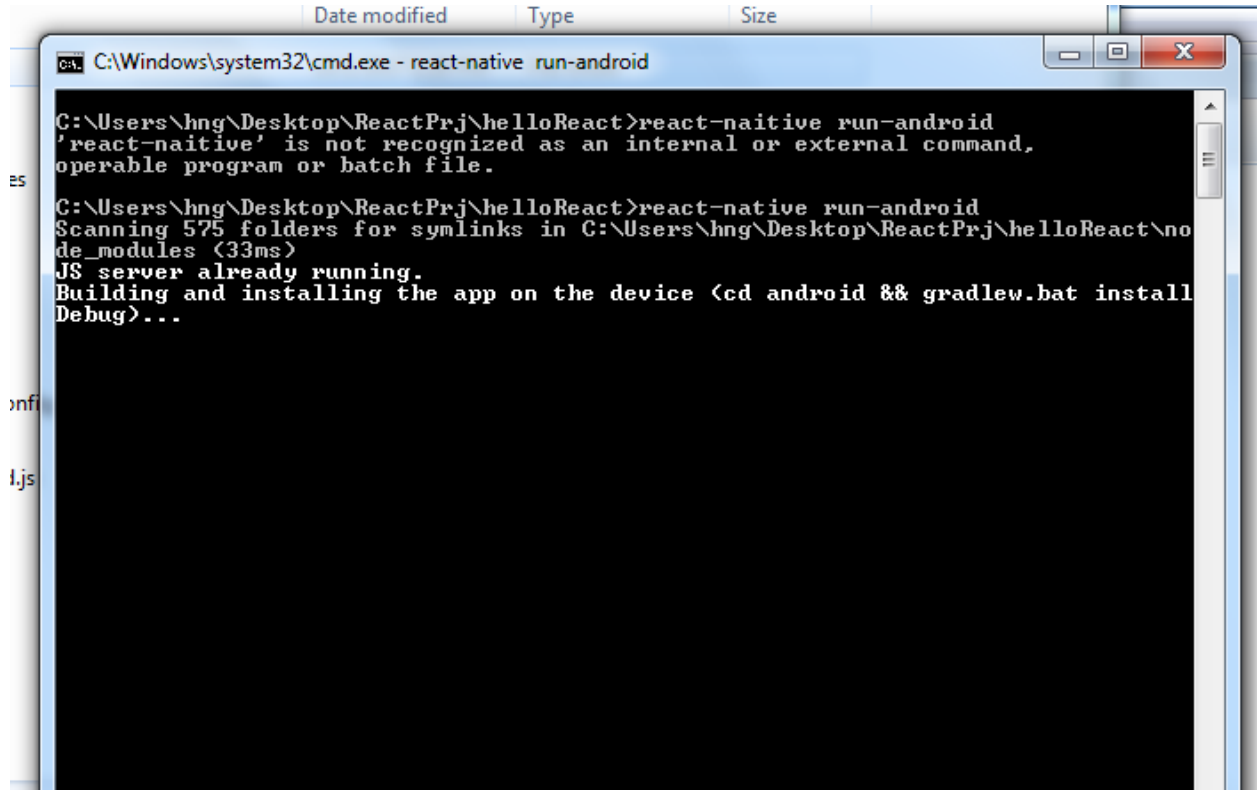
Tiếp theo khởi tạo server Nodejs như sau:

react-native start



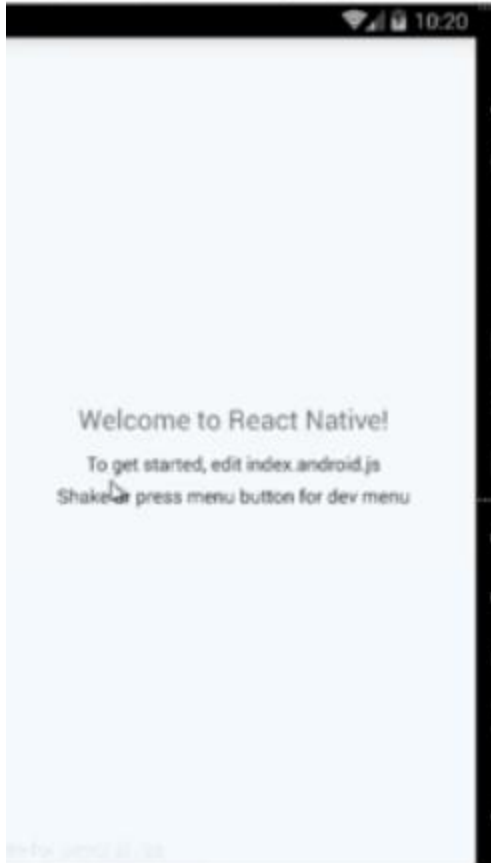
Bấm Shift, nhấn phải chuột và mở 1 cửa sổ Command Line khác để chạy ứng dụng trên máy ảo như sau:

react-native run-android



The screenshot shows a Windows command prompt window titled "C:\Windows\system32\cmd.exe - react-native run-android". The user has entered the command `react-native run-android` twice. The first execution results in an error: `'react-native' is not recognized as an internal or external command, operable program or batch file.` The second execution shows the following output: `Scanning 575 folders for symlinks in C:\Users\hng\Desktop\ReactPrj\helloReact\node_modules (33ms)`, `JS server already running.`, and `Building and installing the app on the device (cd android && gradlew.bat install Debug)...`

Kết quả:



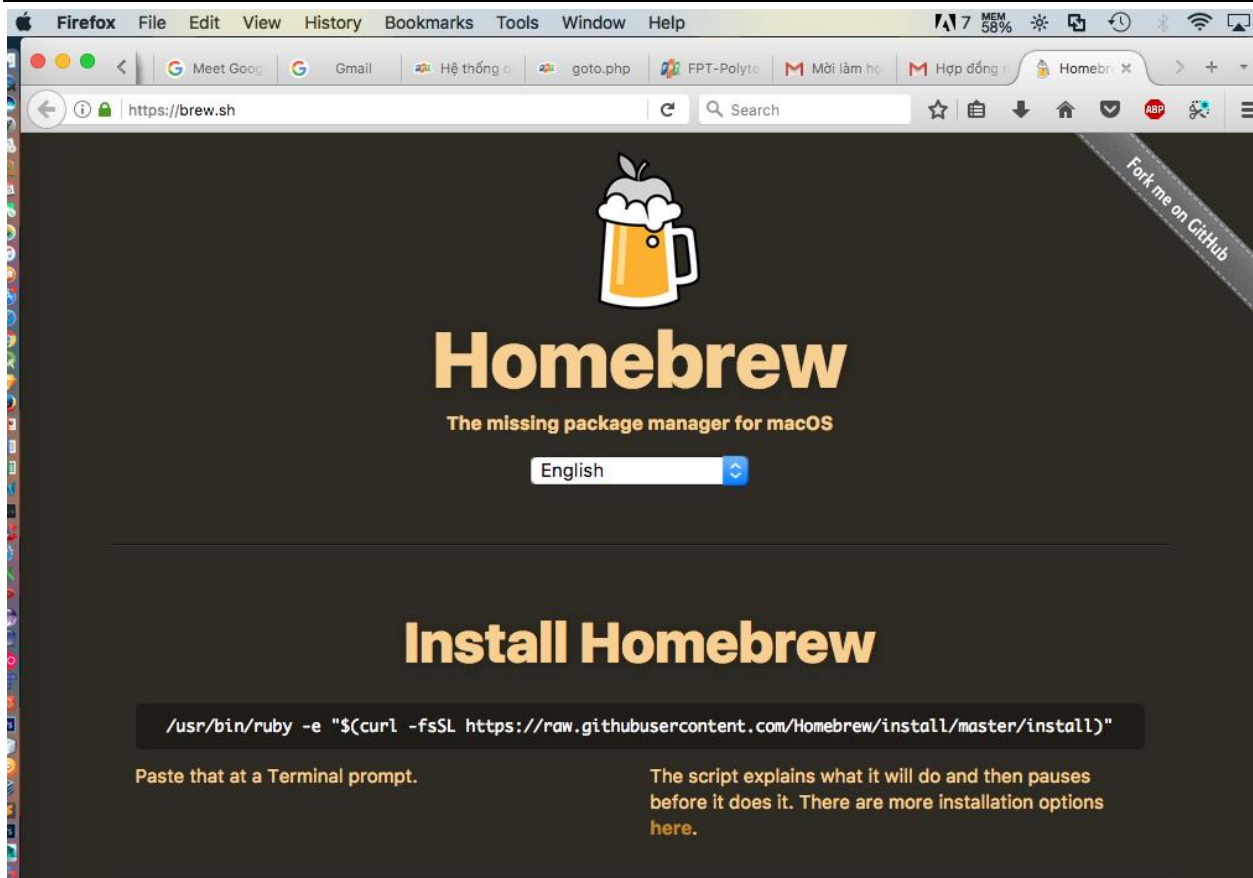
Sản phẩm phải nộp: chụp ảnh quá trình thao tác và paste vào file word, sau đó nộp bài lên LMS

Bài 2 (2 điểm): Cài đặt React Native trên hệ điều hành MacOS

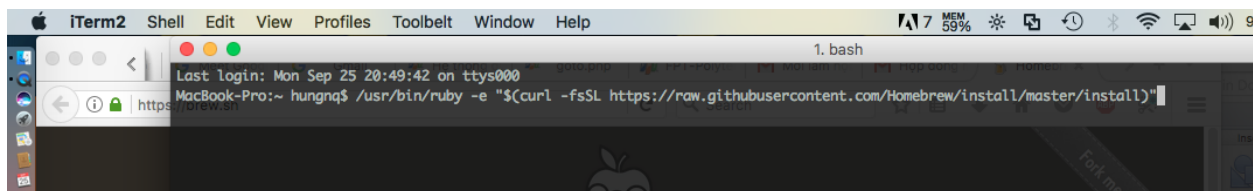
(Nếu không có máy MacOS thì GV cho thêm)

B1 – Vào trang <https://brew.sh/> và copy câu lệnh:

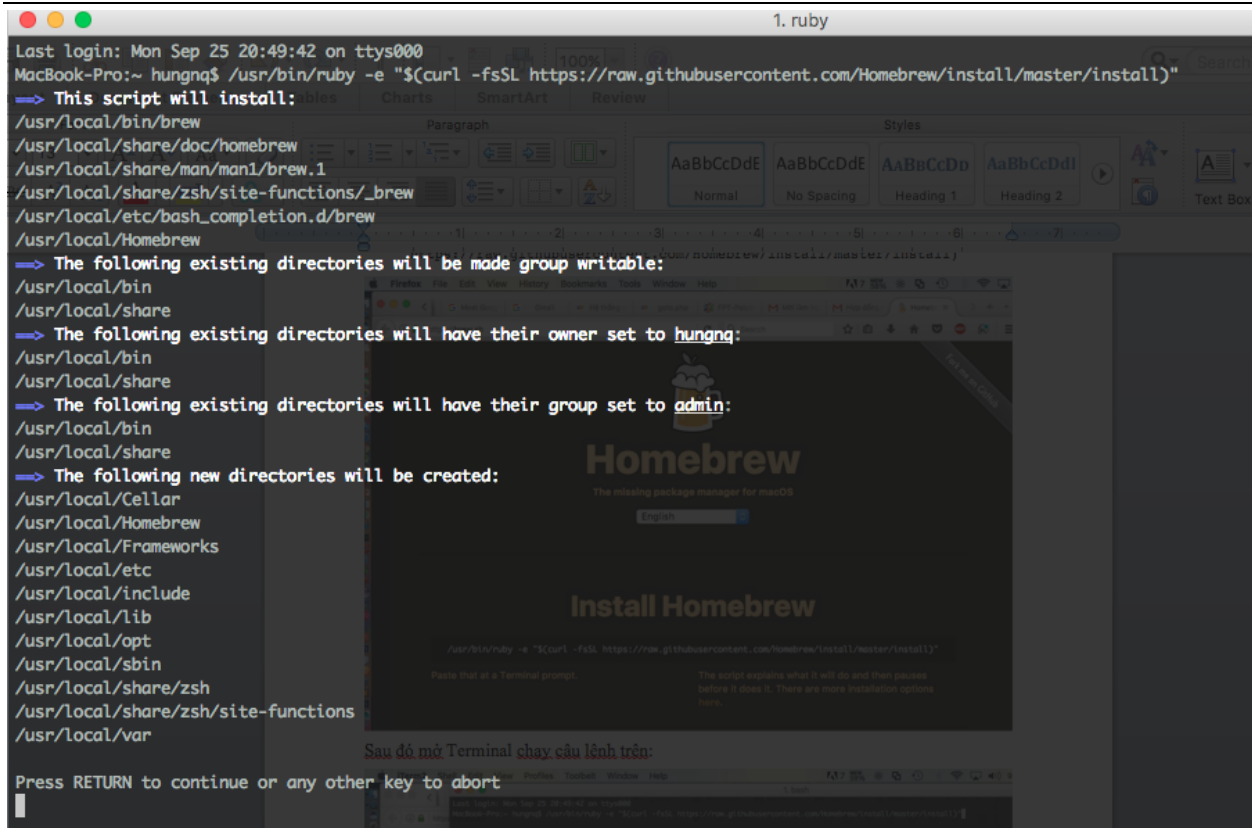
```
/usr/bin/ruby -e "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/master/install)"
```



Sau đó mở Terminal chạy câu lệnh trên:



Sau khi cài đặt thành công sẽ hiển thị thông báo sau:



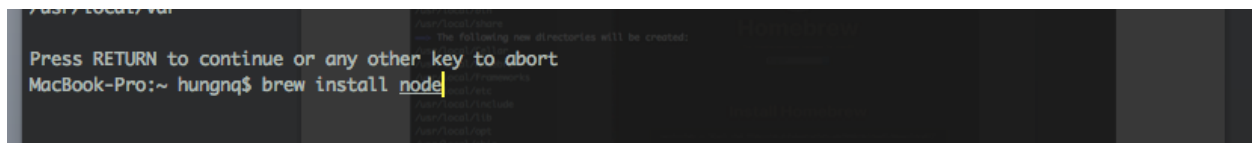
```

Last login: Mon Sep 25 20:49:42 on ttys000
MacBook-Pro:~ hungng$ /usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
=> This script will install:
/usr/local/bin/brew
/usr/local/share/doc/homebrew
/usr/local/share/man/man1/brew.1
/usr/local/share/zsh/site-functions/_brew
/usr/local/etc/bash_completion.d/brew
/usr/local/Homebrew
=> The following existing directories will be made group writable:
/usr/local/bin
/usr/local/share
=> The following existing directories will have their owner set to hungng:
/usr/local/bin
/usr/local/share
=> The following existing directories will have their group set to admin:
/usr/local/bin
/usr/local/share
=> The following new directories will be created:
/usr/local/Cellar
/usr/local/Homebrew
/usr/local/Frameworks
/usr/local/etc
/usr/local/include
/usr/local/lib
/usr/local/opt
/usr/local/sbin
/usr/local/share/zsh
/usr/local/share/zsh/site-functions
/usr/local/var

Press RETURN to continue or any other key to abort
  
```

B2 – Cài đặt NodeJS

Tại cửa sổ Terminal, ta gõ: brew install node rồi ấn Enter



```

MacBook-Pro:~ hungng$ brew install node
  
```

B3 - Sau khi cài xong NodeJS, ta gõ câu lệnh sau vào Terminal để cài đặt :Watchman
 brew install watchman

B4 – Tiếp theo cài đặt React-Native với câu lệnh:

```
npm install -g react-native-cli
```

B5 – Tạo ứng dụng React đầu tiên với câu lệnh:

```
react-native initreactTutorialApp
```

B6 – Truy nhập vào thư mục chứa ứng dụng:

```
cd reactTutorialApp
```

B7 – Khởi tạo server:

```
react-native start
```

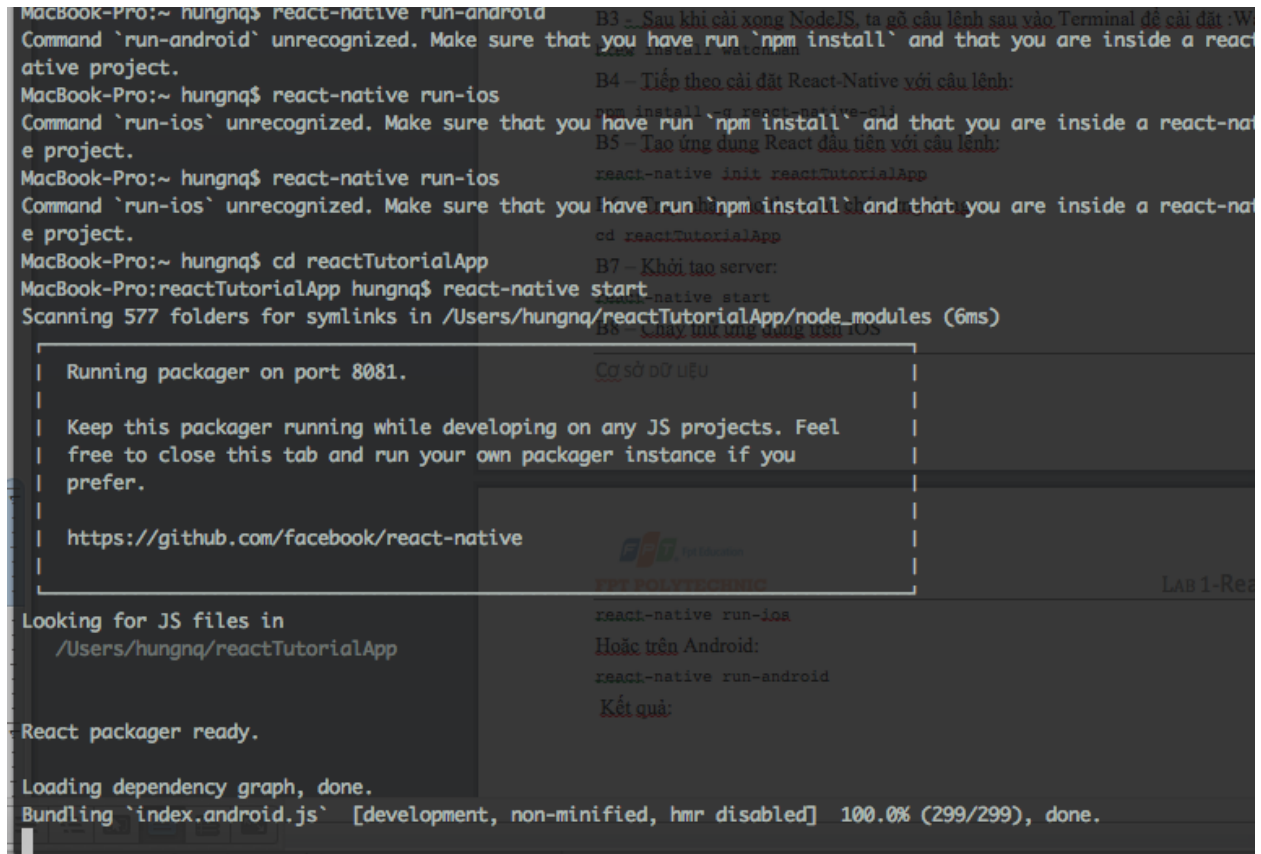
B8 – Chạy thử ứng dụng trên IOS

```
react-native run-ios
```

Hoặc trên Android:

react-native run-android

Kết quả:



```

MacBook-Pro:~ hungnq$ react-native run-android
Command `run-android` unrecognized. Make sure that you have run `npm install` and that you are inside a react-native project.
MacBook-Pro:~ hungnq$ react-native run-ios
Command `run-ios` unrecognized. Make sure that you have run `npm install` and that you are inside a react-native project.
MacBook-Pro:~ hungnq$ react-native run-ios
Command `run-ios` unrecognized. Make sure that you have run `npm install` and that you are inside a react-native project.
MacBook-Pro:~ hungnq$ cd reactTutorialApp
MacBook-Pro:reactTutorialApp hungnq$ react-native start
Scanning 577 folders for symlinks in /Users/hungnq/reactTutorialApp/node_modules (6ms)

| Running packager on port 8081.
| Keep this packager running while developing on any JS projects. Feel free to close this tab and run your own packager instance if you prefer.
| https://github.com/facebook/react-native
|
Looking for JS files in
/Users/hungnq/reactTutorialApp

React packager ready.

Loading dependency graph, done.
Bundling `index.android.js` [development, non-minified, hmr disabled] 100.0% (299/299), done.
  
```



```

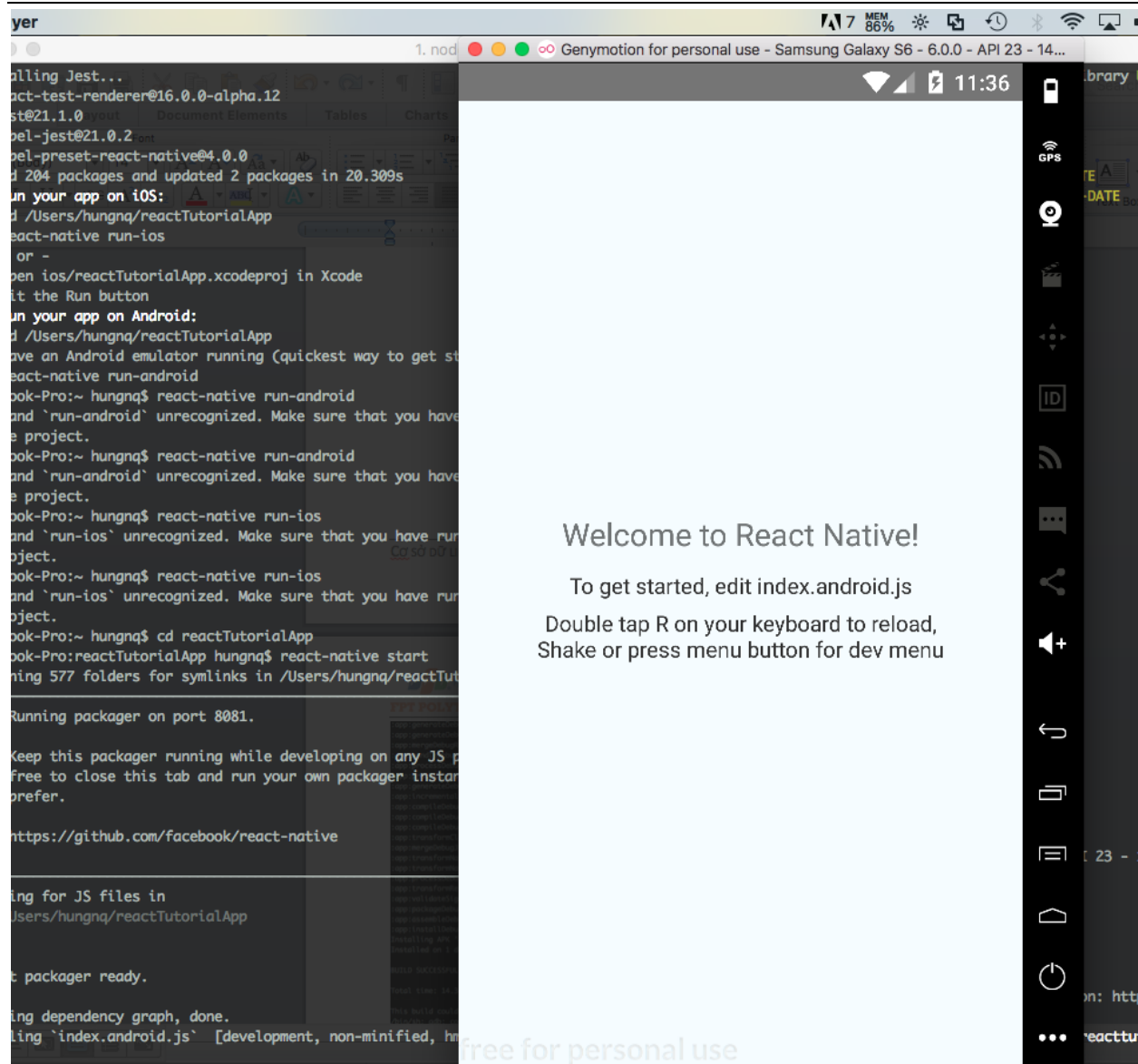
:app:generateDebugResValues UP-TO-DATE
:app:generateDebugResources UP-TO-DATE
:app:mergeDebugResources UP-TO-DATE
:app:bundleDebugJsAndAssets SKIPPED
:app:processDebugManifest UP-TO-DATE
:app:processDebugResources UP-TO-DATE
:app:generateDebugSources UP-TO-DATE
:app:incrementalDebugJavaCompilationSafeguard UP-TO-DATE
:app:compileDebugJavaWithJavac UP-TO-DATE
:app:compileDebugNdk UP-TO-DATE
:app:compileDebugSources UP-TO-DATE
:app:transformClassesWithDexForDebug UP-TO-DATE
:app:mergeDebugJniLibFolders UP-TO-DATE
:app:transformNative_libsWithMergeJniLibsForDebug UP-TO-DATE
:app:transformNative_libsWithStripDebugSymbolForDebug UP-TO-DATE
:app:processDebugJavaRes UP-TO-DATE
:app:transformResourcesWithMergeJavaResForDebug UP-TO-DATE
:app:validateSigningDebug
:app:packageDebug UP-TO-DATE
:app:assembleDebug UP-TO-DATE
:app:installDebug
Installing APK 'app-debug.apk' on 'Samsung Galaxy S6 - 6.0.0 - API 23 - 1440x2560 - 6.0' for app:debug
Installed on 1 device.

BUILD SUCCESSFUL

Total time: 14.381 secs

This build could be faster, please consider using the Gradle Daemon: https://docs.gradle.org/2.14.1/userguide/gradle_daemon.html
/bin/sh: adb: command not found
Starting the app (adb shell am start -n com.reacttutorialapp/com.reacttutorialapp.MainActivity...
MacBook-Pro:reactTutorialApp hungnq$

```

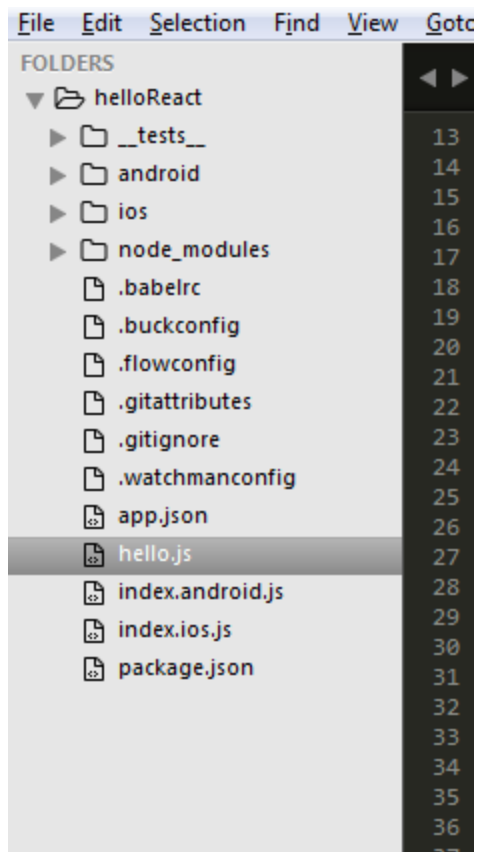


Sản phẩm phải nộp: chụp ảnh quá trình thao tác và paste vào file word, nộp lên LMS

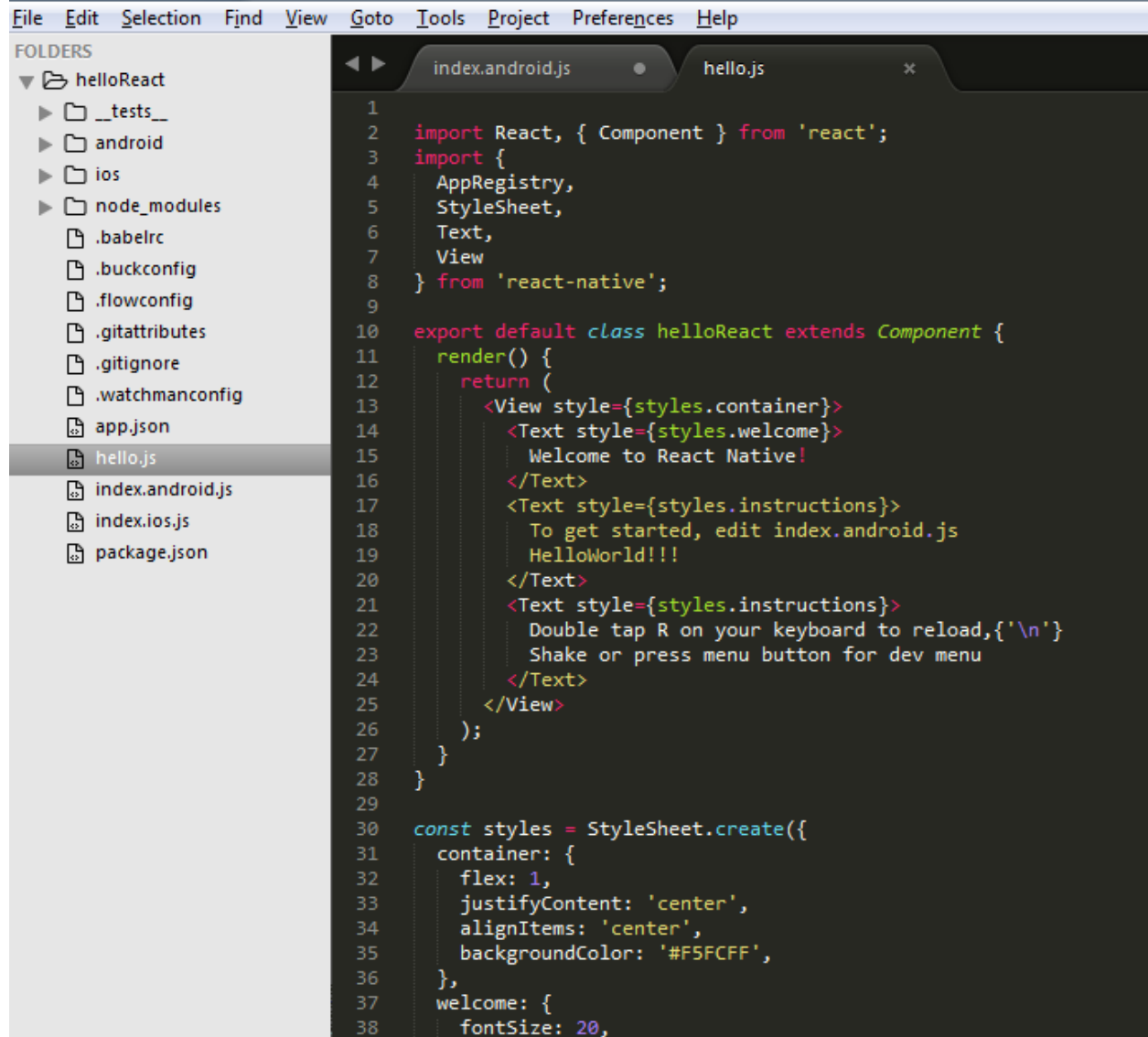
PHẦN II: TÌM HIỂU ỨNG DỤNG REACT NATIVE

Bài 3 (2 điểm): Quản lý file trong ứng dụng React Native

B1 – Tạo file hello.js trong thư mục ứng dụng



B2 – Copy toàn bộ file index.android.js sang file hello.js

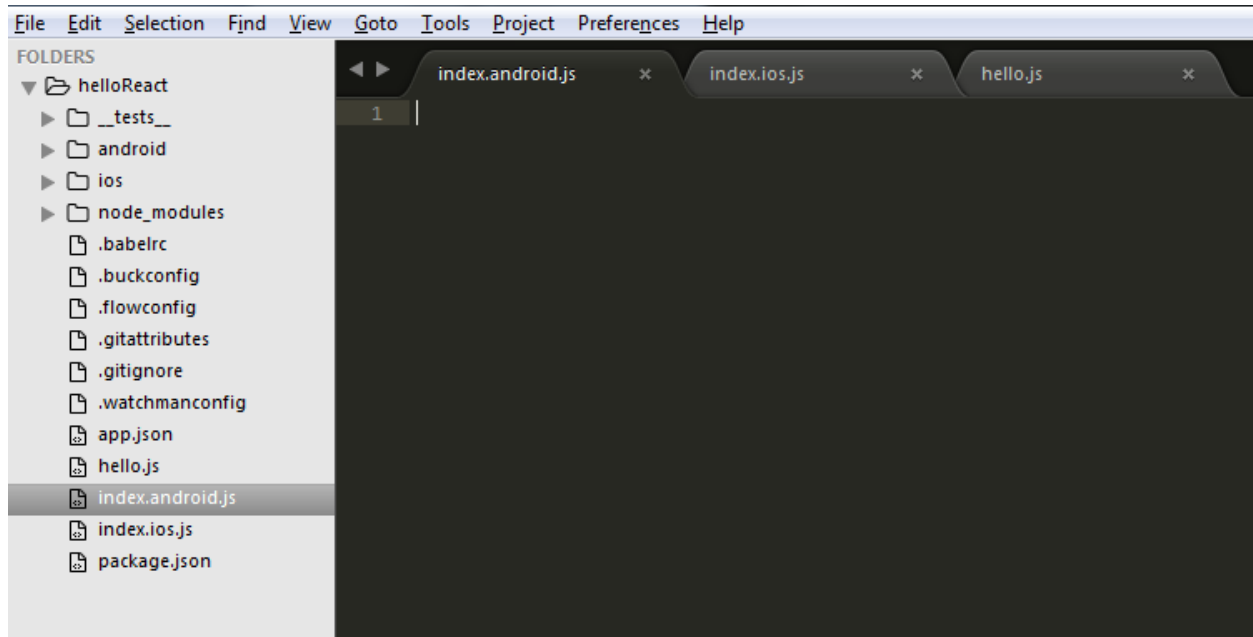


```

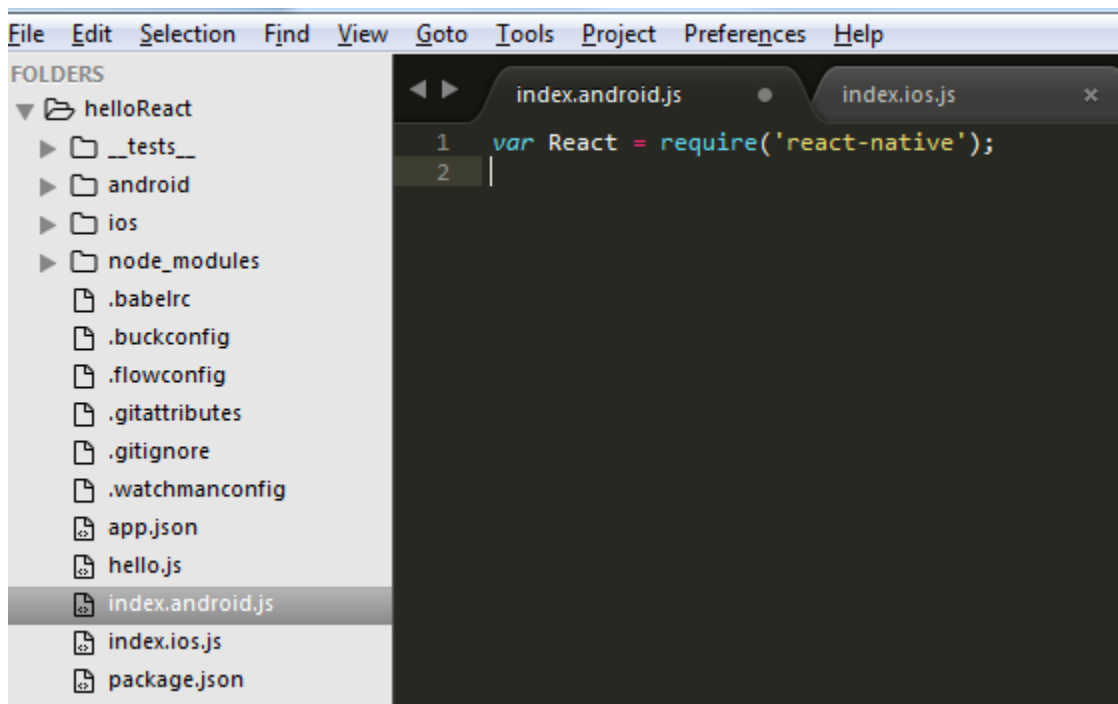
1
2 import React, { Component } from 'react';
3 import {
4   AppRegistry,
5   StyleSheet,
6   Text,
7   View
8 } from 'react-native';
9
10 export default class helloReact extends Component {
11   render() {
12     return (
13       <View style={styles.container}>
14         <Text style={styles.welcome}>
15           Welcome to React Native!
16         </Text>
17         <Text style={styles.instructions}>
18           To get started, edit index.android.js
19           HelloWorld!!!
20         </Text>
21         <Text style={styles.instructions}>
22           Double tap R on your keyboard to reload,{'\n'}
23           Shake or press menu button for dev menu
24         </Text>
25       </View>
26     );
27   }
28 }
29
30 const styles = StyleSheet.create({
31   container: {
32     flex: 1,
33     justifyContent: 'center',
34     alignItems: 'center',
35     backgroundColor: '#F5FCFF',
36   },
37   welcome: {
38     fontSize: 20,

```

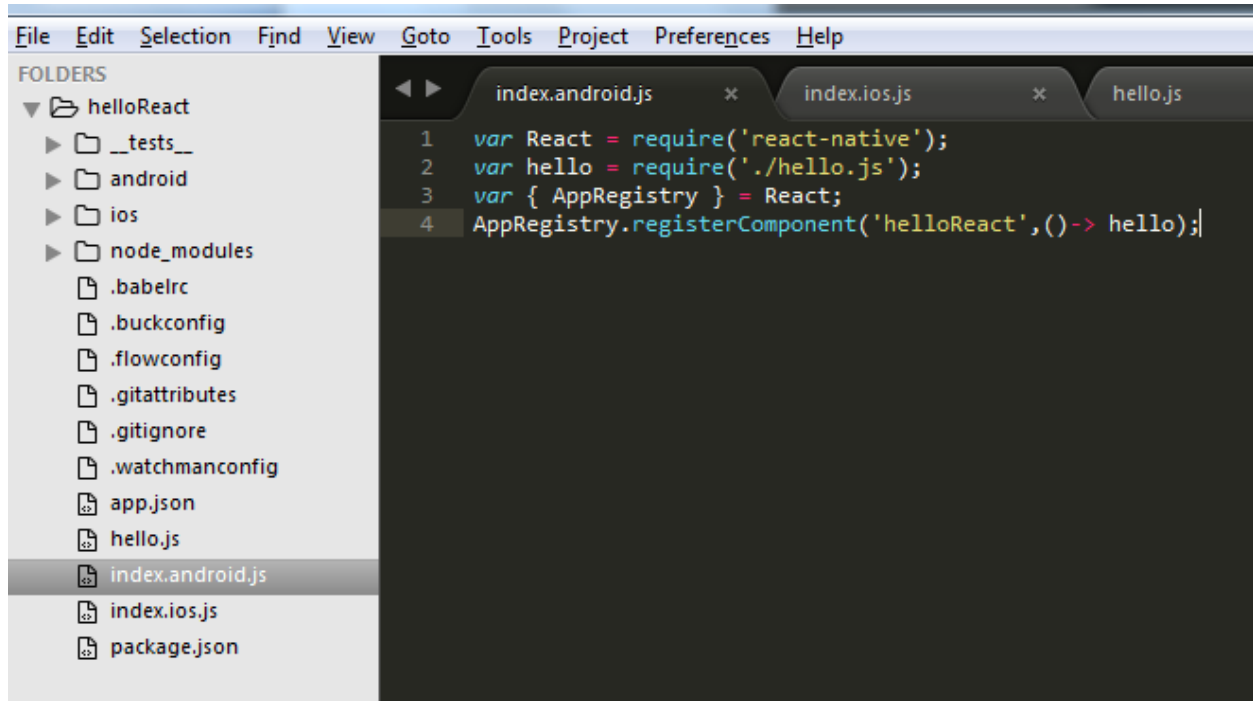
B3 – Xóa nội dung trong file index.android.js và trong index.ios.js



B4 – Import module react-native trong file index.android.js như sau:



Tiếp tục code file index.android.js như sau:



The screenshot shows an IDE window with a menu bar (File, Edit, Selection, Find, View, Goto, Tools, Project, Preferences, Help) and a tab bar with three tabs: index.android.js, index.ios.js, and hello.js. The left sidebar shows a file explorer for a project named 'helloReact'. The file explorer lists folders: __tests__, android, ios, and node_modules. It also lists files: .babelrc, .buckconfig, .flowconfig, .gitattributes, .gitignore, .watchmanconfig, app.json, hello.js, index.android.js (selected), index.ios.js, and package.json. The main editor area displays the content of index.android.js, which is as follows:

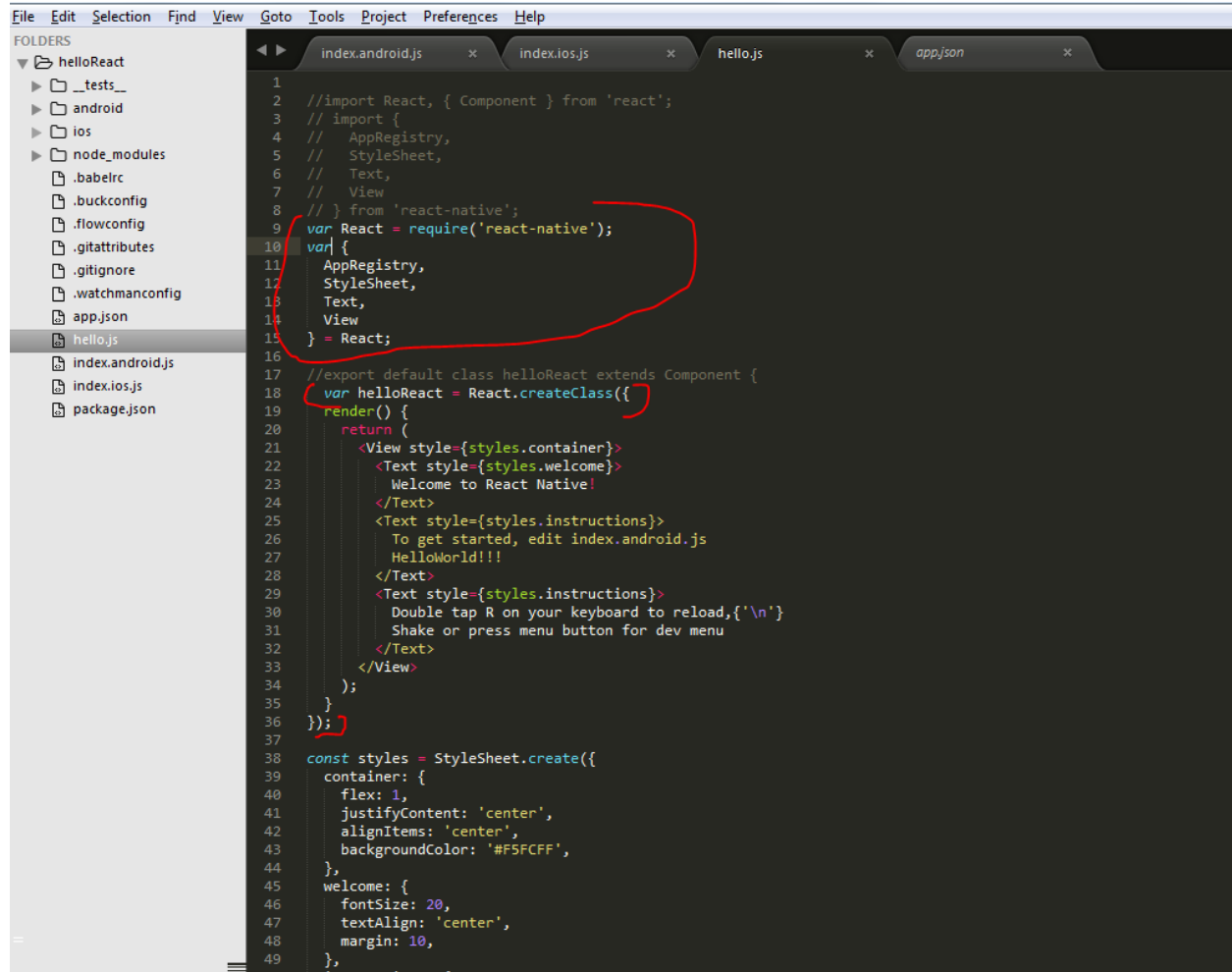
```

1  var React = require('react-native');
2  var hello = require('./hello.js');
3  var { AppRegistry } = React;
4  AppRegistry.registerComponent('helloReact', ()-> hello);

```

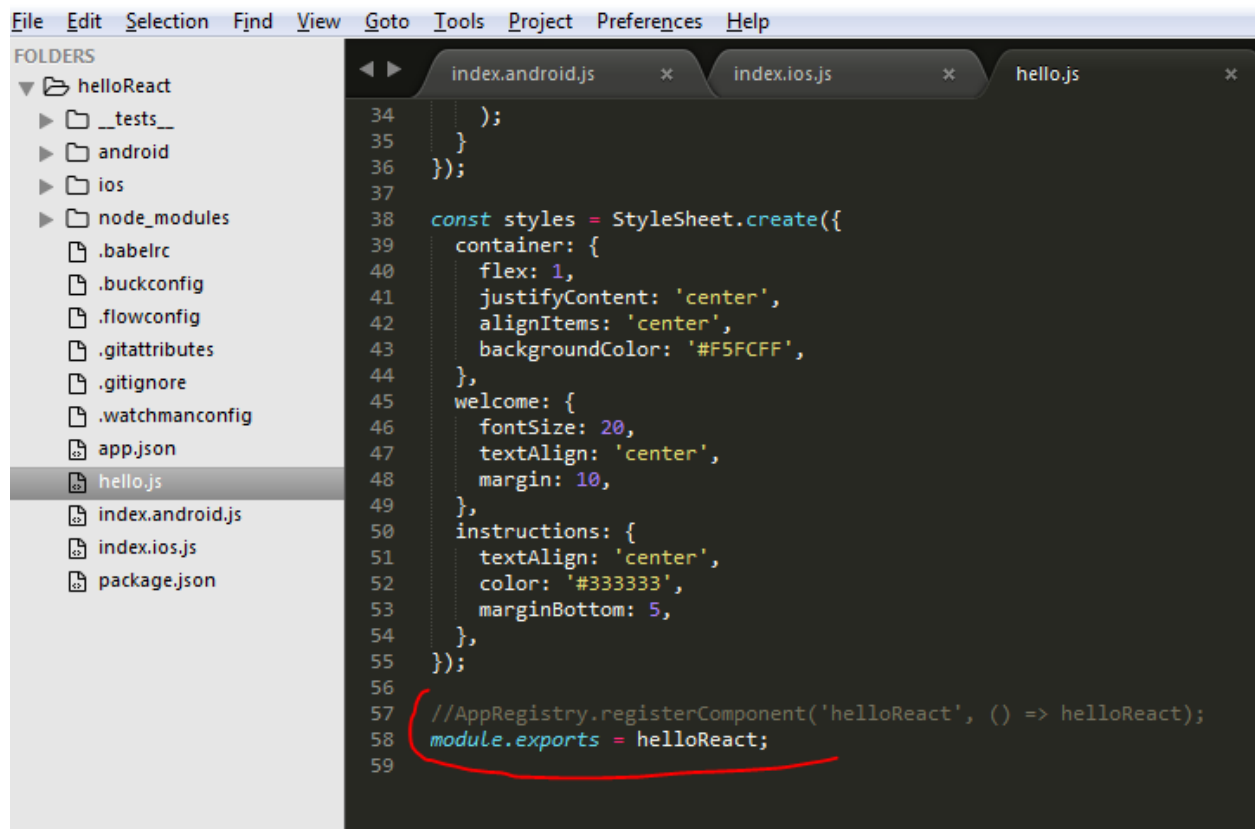
Tiếp theo copy toàn bộ nội dung trong file index.android.js sang file index.ios.js.

B5 – Sửa lại file hello.js



```

1 //import React, { Component } from 'react';
2 // import {
3 //   AppRegistry,
4 //   StyleSheet,
5 //   Text,
6 //   View
7 // } from 'react-native';
8 var React = require('react-native');
9 var {
10   AppRegistry,
11   StyleSheet,
12   Text,
13   View
14 } = React;
15
16 //export default class helloReact extends Component {
17 var helloReact = React.createClass({
18   render() {
19     return (
20       <View style={styles.container}>
21         <Text style={styles.welcome}>
22           Welcome to React Native!
23         </Text>
24         <Text style={styles.instructions}>
25           To get started, edit index.android.js
26           HelloWorld!!!
27         </Text>
28         <Text style={styles.instructions}>
29           Double tap R on your keyboard to reload,{'\n'}
30           Shake or press menu button for dev menu
31         </Text>
32       </View>
33     );
34   }
35 });
36
37 const styles = StyleSheet.create({
38   container: {
39     flex: 1,
40     justifyContent: 'center',
41     alignItems: 'center',
42     backgroundColor: '#F5FCFF',
43   },
44   welcome: {
45     fontSize: 20,
46     textAlign: 'center',
47     margin: 10,
48   },
49   instructions: {
50     margin: 10,
51     text-align: 'center',
52   },
53 });
54 AppRegistry.registerComponent('helloReact', () => helloReact);
55 
```

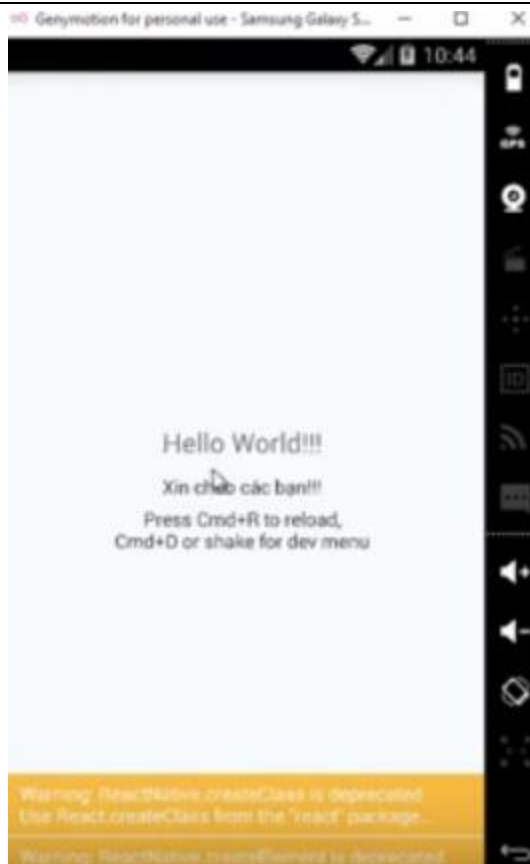


```

34     });
35   }
36   });
37
38   const styles = StyleSheet.create({
39     container: {
40       flex: 1,
41       justifyContent: 'center',
42       alignItems: 'center',
43       backgroundColor: '#F5FCFF',
44     },
45     welcome: {
46       fontSize: 20,
47       textAlign: 'center',
48       margin: 10,
49     },
50     instructions: {
51       textAlign: 'center',
52       color: '#333333',
53       marginBottom: 5,
54     },
55   });
56
57   //AppRegistry.registerComponent('helloReact', () => helloReact);
58   module.exports = helloReact;
59

```

Chạy thử sẽ cho ra kết quả như sau:



Sản phẩm phải nộp: Nộp toàn bộ dự án lên LMS

Bài 4 (2 điểm): Debug và chạy ứng dụng

Giảng viên hướng dẫn cho sinh viên cách debug và chạy ứng dụng

Sản phẩm phải nộp: chụp ảnh quá trình thao tác và paste vào file word, nộp lên LMS

Bài 5 (2 điểm):

Giảng viên cho thêm

Chú ý:

- ✓ *Phần I và Phần II chỉ áp dụng cho dạy tích hợp. Sinh viên làm phần 1 và phần 2 theo 2 bài khác nhau tương ứng với 2 phần lý thuyết đã dạy trong bài học.*
- ✓ *Nếu giảng dạy theo phương pháp truyền thống thì sinh viên phải thực hiện tất cả các bài trong một buổi thực hành.*