

TASK SPECIFICATION

Task 50 (J01) Java basic: class object string type

Task 50.10, .20, .30, .40, .50, .60

Task 50.10 Ứng dụng Hello World với Java

subTask	Yêu cầu	Môi trường
1	Tạo Java project đầu tiên trên VsCode	VsCode
2	Chạy class (lớp) “App” java đầu tiên trên VsCode	VsCode
3	Khởi tạo object (đối tượng) kiểu class String trong class “App”.	VsCode
4	Làm việc với comment trong code java	VsCode
5	Làm việc với một số method (phương thức) của class String	VsCode

Chú ý, commit và push code lên gitlab của mình sau mỗi subtask

Subtask 1: Tạo Java project đầu tiên trên VsCode (1/2)

The screenshot shows the VS Code interface. On the left, the Explorer sidebar displays instructions for opening a folder or cloning a repository. The 'Create Java Project' button is highlighted with a red circle. On the right, the 'Spring Boot Extension Pack' by Pivotal is shown, including its logo, version (v0.1.0), and a list of included extensions like 'Spring Boot Tools' and 'Spring Initializr Java'.

EXPLORER

NO FOLDER OPENED

You have not yet opened a folder.

[Open Folder](#)

Opening a folder will close all currently open editors. To keep them open, [add a folder](#) instead.

You can clone a repository locally.

[Clone Repository](#)

To learn more about how to use git and source control in VS Code [read our docs](#).

You can also [open a Java project folder](#), or create a new Java project by clicking the button below.

[Create Java Project](#)

Extension: Spring Boot Extension Pack

Spring Boot Extension Pack v0.1.0

Pivotal

A collection of extensions for developing Spring Boot applications

[Disable](#) [Uninstall](#) [Settings](#)

This extension is enabled globally.

Details **Feature Contributions** **Runtime Status**

Extension Pack (3)

Spring Boot Tools
Provides validation and content assist for S...
Pivotal

- Support for editing Spring Boot Application configuration properties files (`.properties` and `.yaml`)

Spring Initializr Java

The [Spring Initializr Java Support](#) extension provides support for generating quickstart Spring Boot Java projects with Spring Initializr API.

Spring Boot Dashboard

The [Spring Boot Dashboard](#) extension provides an explorer in the sidebar where you can view all of your projects in spring boot projects

Categories

- Programming Languages
- Linters
- Extension Packs

Resources

- [Marketplace Repository](#)


Marketplace Info


Released 11/29/2017, on 02:43:15
Last 8/17/2021, updated 04:14:07
Identifier pivotal.vscode-boot-dev-


Subtask 1: Tạo Java project đầu tiên trên VsCode (2/2)


Select the project type


No build tools
Work with source code directly without any build tools

Maven create from archetype
Provided by  Maven for Java



Gradle
Provided by  Gradle for Java

Spring Boot
Provided by  Spring Initializr Java Support

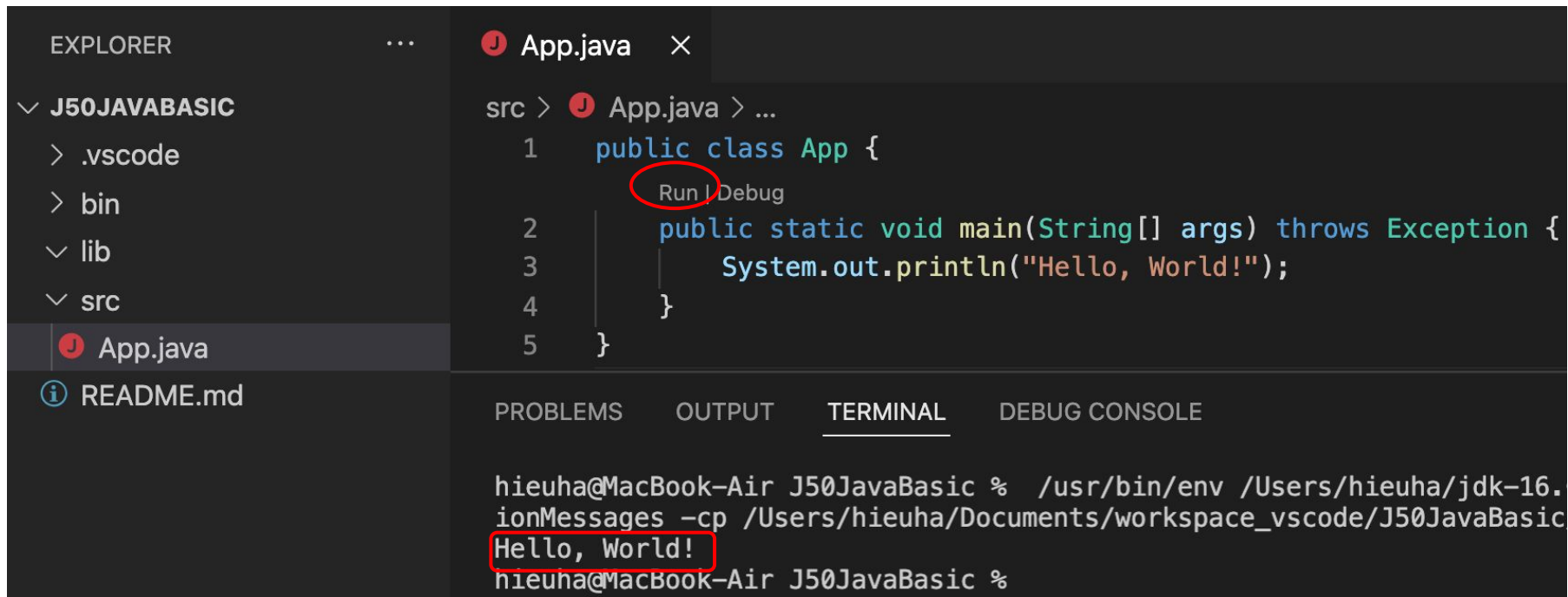
Quarkus
Provided by  Quarkus

MicroProfile
Provided by  MicroProfile Starter

or create a
below.

**Spring Boot Tools**
Provides validation and content assist for S...
Pivotal 

Subtask 2: Chạy class (lớp) “App” java đầu tiên trên VsCode



```
public class App {  
    public static void main(String[] args) throws Exception {  
        System.out.println("Hello, World!");  
    }  
}
```

Subtask 3: Khởi tạo object (đối tượng) kiểu class String trong class "App"

```
public static void main(String[] args) throws Exception {  
    String  
    System.out.println("Hello, World!" + appName);  
}
```

String - java.lang java.lang.String

- String appName =
- String appName = args[0];
- String appName
- String app
- String appName = args[
- StringBuffer - java.lang
- StringBuilder - java.lang
- StringIndexOutOfBoundsException
- StringBufferInputStream - java.l
- StringCharacterIterator - java.t
- StringConcatException - java.lar

```
1 public class App {  
    Run | Debug  
2     public static void main(String[] args) throws Exception {  
3         String appName = "Devcamp";  
4         System.out.println("Hello, World!" + appName);  
5     }  
6 }  
7
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
hieuha@MacBook-Air J50JavaBasic % cd /Users/hieuha/Documents/workspa  
a/jdk-16.0.1.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptio  
Basic/J50JavaBasic/bin App  
Hello, World!Devcamp  
hieuha@MacBook-Air J50JavaBasic %
```

Subtask 3: Khởi tạo object (đối tượng) kiểu class String trong class "App"

```
1 public class App {
    Run | Debug
2     public static void main(String[] args) throws Exception {
3         // This is a comment
4         String appName = "Devcamp will help everyone to know coding";
5         System.out.println("Hello, World! " + appName.length()); // This is a comment
6     }
7 }
```

length
lastIndexOf(String str) : int
lastIndexOf(String str, int fromIndex) : int
lastIndexOf(int ch) : int
lastIndexOf(int ch, int fromIndex) : int
length() : int
lines() : Stream<String>

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

hieuha@MacBook-Air J50JavaBasic % cd /Users/hieuha/Documents/workspace_vscode/J50Java/jdk-16.0.1.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp Basic/J50JavaBasic/bin App
Hello, World! 41
hieuha@MacBook-Air J50JavaBasic %

Trả về độ dài String (chuỗi)

Subtask 4: Làm việc với comment trong code java

src > App.java > App

```
1  public class App {  
    Run | Debug  
2      public static void main(String[] args) throws Exception {  
3          // This is a comment  
4          String appName = "Devcamp";  
5          /*  
6              This is comment for multi line  
7              line 1.  
8              line 2.  
9          */  
10         System.out.println("Hello, World!" + appName); // This is a comment  
11     }  
12 }
```

```
public class App {  
    public static void main(String[] args) throws Exception {  
        // This is a comment  
        String appName = "Devcamp";  
        /*  
        This is comment for multi line
```


Subtask 5: Làm việc với một số method (phương thức) của class String

```
1 public class App {
    Run | Debug
2     public static void main(String[] args) throws Exception {
3         // This is a comment
4         String appName = "DevCamp will help everyone to know coding.";
5         System.out.println("Hello, World! " + appName.length()); // This is a comment
6         System.out.println("uppercase: " + appName.toUpperCase()); // This is a comment
7         System.out.println("LOWERCASE: " + appName.toLowerCase()); // This is a comment
8     }
9 }
```

```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
hieuha@MacBook-Air J50JavaBasic % cd /Users/hieuha/Documents/workspace_vscode/J50JavaBasic/J50JavaBasic
a/jdk-16.0.1.jdk/Contents/Home/bin java -DShowCodeDetailsInExceptionMessages -cp /Users/hieuha/Documents/workspace_vscode/J50JavaBasic/J50JavaBasic/bin App
Hello, World! 42
uppercase: DEVCCAMP WILL HELP EVERYONE TO KNOW CODING.
lowercase: devccamp will help everyone to know coding.
hieuha@MacBook-Air J50JavaBasic %

```

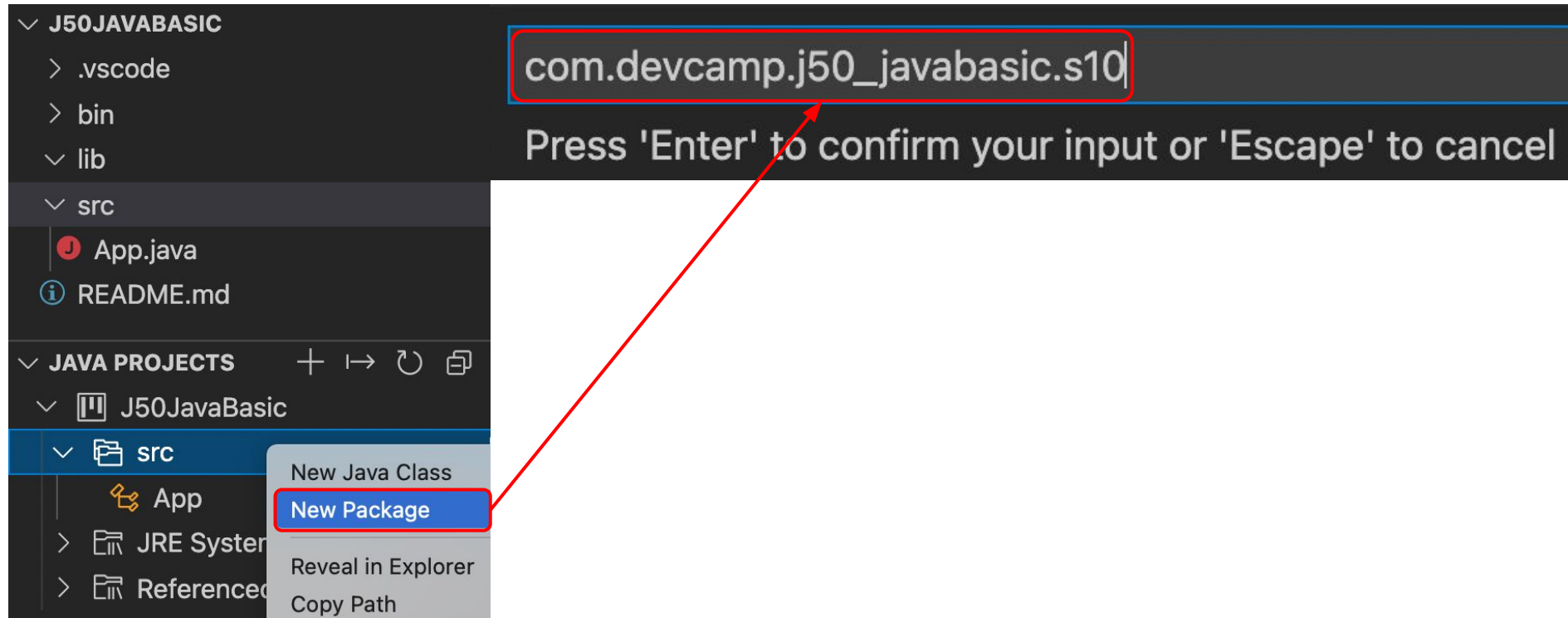
https://www.w3schools.com/java/java_ref_string.asp

Task 50.20 TDD: Làm việc với package(gói) và class(lớp) tự tạo

sT	Yêu cầu	Môi trường
1	Tạo java package đầu tiên trên VsCode	VsCode
2	Tạo class(lớp) “NewDevcampApp” trong package	VsCode
3	Tạo method main để chạy class(lớp) “NewDevcampApp”	VsCode
4	Tạo 2 method mới trong class(lớp) “NewDevcampApp”	VsCode
5	Gọi 2 method mới trong method main.	VsCode
6	Khai báo và sử dụng class tự tạo trong class khác	VsCode

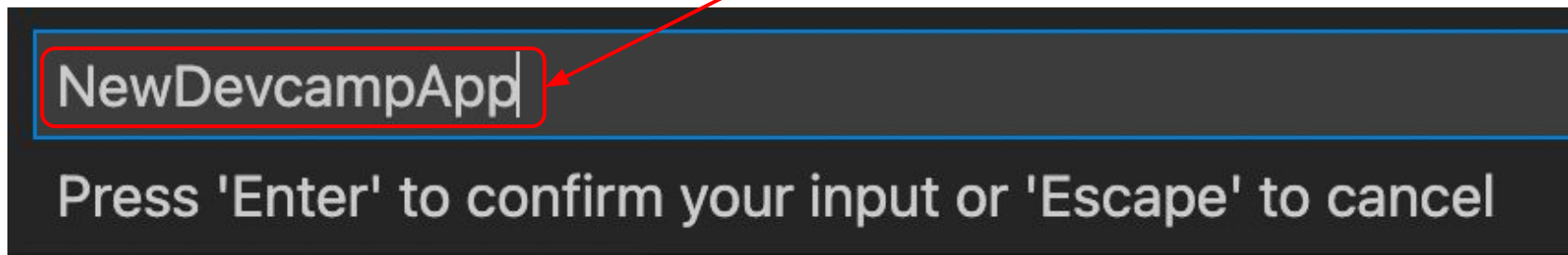
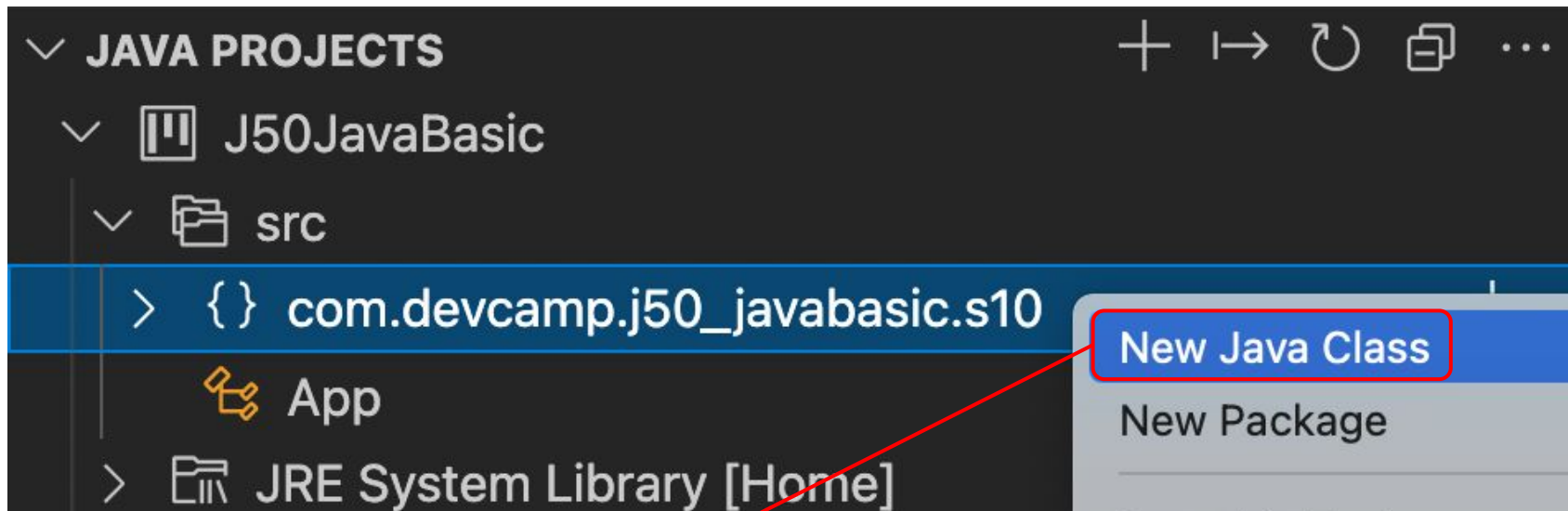
Chú ý, commit và push code lên gitlab của mình sau mỗi subtask

Subtask 1: Tạo package (gói) mới



Chú ý, commit và push code lên gitlab của mình sau mỗi subtask

Subtask 2: Tạo class (lớp) mới trong package (gói)



Thực hiện code với class mới tạo

The screenshot shows an IDE with the following components:

- EXPLORER:** Displays the project structure. Under **J50JAVABASIC**, the **src** folder is expanded, showing the package **com/devcamp/j50_javabasic/s10**. Inside this package, the file **NewDevcampApp.java** is highlighted with a red box.
- Code Editor:** Shows the content of **NewDevcampApp.java**. The package declaration `package com.devcamp.j50_javabasic.s10;` and the class declaration `public class NewDevcampApp {` are highlighted with a red box. The code is as follows:

```
1 package com.devcamp.j50_javabasic.s10;
2
3 public class NewDevcampApp {
4
5 }
6
```
- Terminal:** Shows the command prompt with the text `hieuha@MacBook-Air J50JavaBasic %`.

Subtask 3: Tạo method main để chạy class(lớp) “NewDevcampApp”

```
package com.devcamp.j50_javabasic.s10;
```

```
public class NewDevcampApp {
```

pu

  **public static void main(String[] args)** tabnine

  **public static void main(String[] args**


  **public static void main(String[] args) {**

  **public static void main(String[]**

  **public static void main(String**

 **public**

 **public_method** Public method

 **public_static_method** Public static method

 **PublicKey** - java.security

 **Publisher** - java.util.concurrent.Flow

 **Purpose** - javax.xml.crypto.KeySelector

 **PushPromiseHandler** - java.net.http.HttpResponse

Subtask 3: Tạo method main để chạy class(lớp) “NewDevcampApp”

```
1 package com.devcamp.j50_javabasic.s10;
```

```
2  
3 public class NewDevcampApp {
```

Run | Debug



```
4     public static void main(String[] args) {
```



```
5          sys
```



```
6     }
```

```
7 }
```



```
8
```

  **system**

  **sysctl**

  **sys.exit(**

  **sys.exit**

  **syslog**

 **syserr**

 **sysout** print to standard... >

 **systrace**

 **System** – java.lang

 **SysexMessage** – javax.sound.midi

 **SystemMenuBar** – javax.swing.plaf.basic.BasicInternal...

Subtask 3: Tạo method main để chạy class(lớp) "NewDevcampApp"

src > com > devcamp > j50_javabasic > s10 >  NewDevcampApp.java

```
1  package com.devcamp.j50_javabasic.s10;
2
3  public class NewDevcampApp {
4      |   Run | Debug
5      |   public static void main(String[] args) {
6      |       |   System.out.println("I'm a new devcamp app");
7      |       |   }
8      |   }
```

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

```
hieuha@MacBook-Air J50JavaBasic % cd /Users/hieuha/Documents
v /Users/hieuha/jdk-16.0.1.jdk/Contents/Home/bin/java -XX:+Sh
nts/workspace_vscode/J50JavaBasic/J50JavaBasic/bin com.devcam
I'm a new devcamp app
hieuha@MacBook-Air J50JavaBasic %
```


Subtask 4: Tạo 2 method mới trong class(lớp) "NewDevcampApp"

```
src > com > devcamp > j50_javabasic > s10 > NewDevcampApp.java > NewDevcampApp
1  package com.devcamp.j50_javabasic.s10;
2
3  public class NewDevcampApp {
    Run | Debug
4      public static void main(String[] args) {
5          System.out.println("I'm a new devcamp app");
6          NewDevcampApp.name("HieuHN", 42);
7      }
8      public void name(String name) {
9          System.out.println("My name is " + name);
10     }
11     public static void name(String name, int age) {
12         System.out.println("My name is " + name + " age is " + age);
13     }
14 }
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
hieuha@MacBook-Air J50JavaBasic % cd /Users/hieuha/Documents/workspace_vscode/J50JavaBasic/
v /Users/hieuha/jdk-16.0.1.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptions
workspace_vscode/J50JavaBasic/J50JavaBasic/bin com.devcamp.j50_javabasic.s10.NewDevcampApp
I'm a new devcamp app
My name is HieuHN age is 42
hieuha@MacBook-Air J50JavaBasic %
```

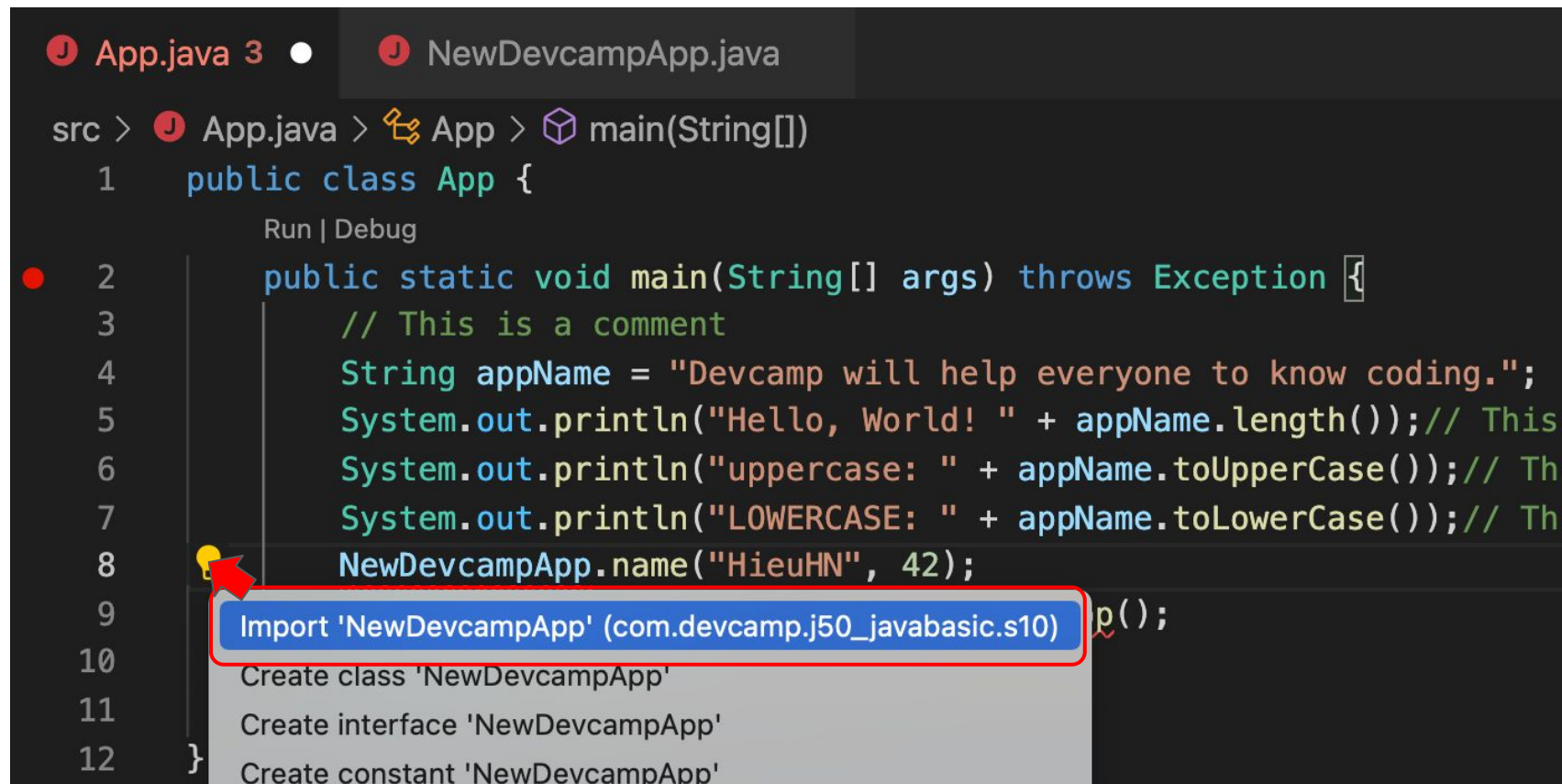
Subtask 5: Gọi 2 method mới trong method main.

```
src > com > devcamp > j50_javabasic > s10 > NewDevcampApp.java > NewDevcampApp > main(String[])
1  package com.devcamp.j50_javabasic.s10;
2
3  public class NewDevcampApp {
4      public static void main(String[] args) {
5          System.out.println("I'm a new devcamp app");
6          NewDevcampApp.name("HieuHN", 42);
7          NewDevcampApp newApp = new NewDevcampApp();
8          newApp.name("Ha Ngoc Hieu");
9      }
10     public void name(String name) {
11         System.out.println("My name is " + name);
12     }
13     public static void name(String name, int age) {
14         System.out.println("My name is " + name + " age is " + age);
15     }
16 }
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE Java Process Cons

```
hieuha@MacBook-Air J50JavaBasic % cd /Users/hieuha/Documents/workspace_vscode/J50JavaBasic/J50JavaBasic/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp
nts/workspace_vscode/J50JavaBasic/J50JavaBasic/bin com.devcamp.j50_javabasic.s10.NewDevcampApp
I'm a new devcamp app
My name is HieuHN age is 42
My name is Ha Ngoc Hieu
hieuha@MacBook-Air J50JavaBasic %
```

Subtask 6: Khai báo và sử dụng class tự tạo trong class khác



```
src > App.java > App > main(String[])
1  public class App {
    Run | Debug
2  public static void main(String[] args) throws Exception {
3      // This is a comment
4      String appName = "Devcamp will help everyone to know coding.";
5      System.out.println("Hello, World! " + appName.length()); // This
6      System.out.println("uppercase: " + appName.toUpperCase()); // Th
7      System.out.println("LOWERCASE: " + appName.toLowerCase()); // Th
8      NewDevcampApp.name("HieuHN", 42);
9
10
11
12 }
```

Import 'NewDevcampApp' (com.devcamp.j50_javabasic.s10)

- Create class 'NewDevcampApp'
- Create interface 'NewDevcampApp'
- Create constant 'NewDevcampApp'

Subtask 6: Khai báo và sử dụng class tự tạo trong class khác

App.java × NewDevcampApp.java

src > App.java > App > main(String[])

```
1  import com.devcamp.j50_javabasic.s10.NewDevcampApp;
2
3  public class App {
    Run | Debug
4      public static void main(String[] args) throws Exception {
5          // This is a comment
6          String appName = "Devcamp will help everyone to know coding.";
7          System.out.println("Hello, World! " + appName.length()); // This is a comment
8          System.out.println("uppercase: " + appName.toUpperCase()); // This is a comment
9          System.out.println("LOWERCASE: " + appName.toLowerCase()); // This is a comment
10         NewDevcampApp.name("HieuHN", 42);
11         NewDevcampApp newApp = new NewDevcampApp();
12         newApp.name("Ha Ngoc Hieu");
13     }
14 }
```

```
Hello, World! 42
uppercase: DEVCAMP WILL HELP EVERYONE TO KNOW CODING.
LOWERCASE: devcamp will help everyone to know coding.
My name is HieuHN age is 42
My name is Ha Ngoc Hieu
hieuhac@MacBook-Air J50JavaBasic %
```

Task 50.30 Làm quen với method của String

subTask	Yêu cầu	Môi trường
1	Tạo Java project có tên HELLODEV CAMP trên VsCode	VsCode
2	Chạy class (lớp) “App” java trên VsCode, println(in) ra dòng chữ "CHAO MUNG DEN VOI DEV CAMP 120"	VsCode
3	Khởi tạo object (đối tượng) kiểu class String trong class “App”. Theo mẫu: String appName = "Quyet tam thanh lap trinh vien!" và println(in) appName	VsCode
4	Làm việc với comment trong code java	VsCode
5	Làm việc với một số method (phương thức) của class String: ghi ra được chiều dài length của appName, chuyển appName thành chữ Hoa, và chữ thường	VsCode

Chú ý, commit và push code lên gitlab của mình sau mỗi subtask



Phiên bản PIE

Task 50.40 TDD: Làm quen với package, class

sT	Yêu cầu	Môi trường
1	Tạo package <code>com.devcamp</code>	VsCode
2	Tạo package <code>com.devcamp.j01_javabasic.s40</code>	VsCode
3	Tạo class <code>Voucher</code> trong package <code>com.devcamp.j01_javabasic.s40</code> với method <code>public static void main(String[] args)</code>	VsCode
4	Tạo method <code>showVoucher()</code> với tham số <code>voucherCode</code> . Cho phép in ra nội dung: "This is voucher code: V0023". trong đó "V0023" lấy từ tham số <code>voucherCode</code> .	VsCode

Chú ý, commit và push code lên gitlab của mình sau mỗi subtask




Phiên bản PIE

Task 50.50 TDD: Làm quen với package, class

sT	Yêu cầu	Môi trường
1	Tạo package <code>com.devcamp.j01_javabasic.s50</code>	VsCode
2	Tạo class <code>Voucher</code> trong package <code>com.devcamp.j01_javabasic.s50</code> với nội dung như trong hình slide tiếp.	VsCode
3	Chạy class lần lượt theo yêu cầu của comment.	VsCode
4	PUSH (đẩy) các code đã làm lên gitlab	VsCode

Chú ý, commit và push code lên gitlab của mình sau mỗi subtask


```
src > com > devcamp > j01_javabasic > s50 >  Voucher.java > ...
```

```
1 package com.devcamp.j01_javabasic.s50;
2
3 public class Voucher {
4     public String voucherCode = "V000000";
5
6     public String getVoucherCode() {
7         return voucherCode;
8     }
9     public void setVoucherCode(String voucherCode) {
10         this.voucherCode = voucherCode;
11     }
12     public void showVoucher() {
13         System.out.println("Voucher code is: " + this.voucherCode);
14     }
15     public void showVoucher(String voucherCode) {
16         System.out.println("This is voucher code: " + this.voucherCode);
17         System.out.println("This is voucher code too: " + voucherCode);
18     }
19 }
```

Run | Debug

```
19 public static void main(String[] args) throws Exception {
20     Voucher voucher = new Voucher();
21     //0. Chạy class này rồi comment dòng code dưới
22     voucher.showVoucher();
23
24     // 1. Bỏ comment dòng code dưới rồi chạy lại class này.
25     //voucher.showVoucher("CODE8888");
26 }
```

```
19 public static void main(String[] args) throws Exception {
20     Voucher voucher = new Voucher();
21     //0. Chạy class này rồi comment dòng code dưới
22     voucher.showVoucher();
23
24     // 1. Bỏ comment dòng code dưới rồi chạy lại class này.
25     //voucher.showVoucher("CODE8888");
26
27     /**
28     2. Comment lại dòng code trên
29     Bỏ comment 2 dòng code dưới rồi chạy lại class này.
30     */
31     //voucher.voucherCode = "CODE2222";
32     //voucher.showVoucher("0008888");
33
34     /**
35     3. Comment lại 2 dòng code trên
36     Bỏ comment các dòng code dưới rồi chạy lại class này.
37     */
38     String code = "VOUCHER";
39     voucher.setVoucherCode(code);
40     System.out.println(voucher.getVoucherCode());
41     voucher.showVoucher(voucher.getVoucherCode());
42     voucher.showVoucher();
43 }
44 }
```


Task 50.60 TDD: Làm quen với package, class (nâng cao)

Chạy và dự đoán kết quả dòng code bên cạnh.

```
src > com > devcamp > j01_javabasic > s50 > MainVoucher.java > MainVoucher.java
1  package com.devcamp.j01_javabasic.s50;
2
3  public class MainVoucher {
4      public static void main(String[] args) {
5          Voucher voucher1 = new Voucher();
6          Voucher voucher2 = new Voucher();
7
8          if(voucher1==voucher2) {
9              System.out.println("1. We are the same");
10         }else {
11             System.out.println("2. We are NOT the same");
12         }
13
14         voucher2 = voucher1;
15         if(voucher1==voucher2) {
16             System.out.println("3. We are the same");
17         }else {
18             System.out.println("4. We are NOT the same");
19         }
20
21         voucher1.setVoucherCode("AMAZING");
22         if(voucher1==voucher2) {
23             System.out.println("5. We are the same");
24         }else {
25             System.out.println("6. We are NOT the same");
26         }
27     }
28 }
```

S10 other code.

```
import java.lang.String;
import java.util.ArrayList;
import com.devcamp.j50.NewDevcampApp;
public class App {
    public static void main(String[] args) throws
Exception {
        ArrayList abc = new ArrayList();
        NewDevcampApp text = new NewDevcampApp();
        System.out.println("Hello, World! My name is "
+text.name4("    HieuHN    ",20,
"hieuhn@gmail.com").toUpperCase().toLowerCase());
        System.out.println("Hello, World! My name is "
+text.name3("    HieuHN
",20).toUpperCase().toLowerCase());
        System.out.println("Hello, World! My name is "
+text.name2("    HieuHN    ").length());
    }
}
```

```
package com.devcamp.j50;
public class NewDevcampApp {
    public static void main(String[] args) {
        System.out.println("test class trong package!");
        NewDevcampApp text = new NewDevcampApp();
        text.name1();
        System.out.println("Hello, World! My name is "+text.name2("
HieuHN!    ").length());
    }
    public void name1() {
        System.out.println("method name1");
    }
    public String name2(String param) {
        return param.trim();
    }
    public String name3(String string, int i) {
        return string.trim() + " " + i;
    }
    public String name4(String string, int i, String string2) {
        return string.trim() + " " + i + "" + " " + string2;
    }
}
```