

CPS 2231 2025 Spring

Lab 0: Tutorial

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In all labs this semester, we will use code to check code, which can avoid some points lost by wrong spelling. In this lab, you will learn how to use check.py to check all labs.

Step 1: Download a file called check.py in Lab 0 in canvas.

Step 2: Install Python.

Windows

1. Download Python: Go to python.org/downloads.
2. Click "Download Python" (latest version recommended, e.g., Python 3.12).
3. Run the Installer:

Open the downloaded .exe file.

Check the box: "Add Python to PATH" (important for terminal access).

Click "Install Now" and follow the prompts.

4. Verify Installation: Open Command Prompt or PowerShell or Terminal.

Run: `python --version`

You might see the version of your python, for example:

```
Python 3.12.4
```

5. Run this code in terminal: `javac -version`, for example

```
javac 11.0.26
```

If failed, you can download the JDK file in canvas and install it again. You should remember the installation path and find the bin file as follow:

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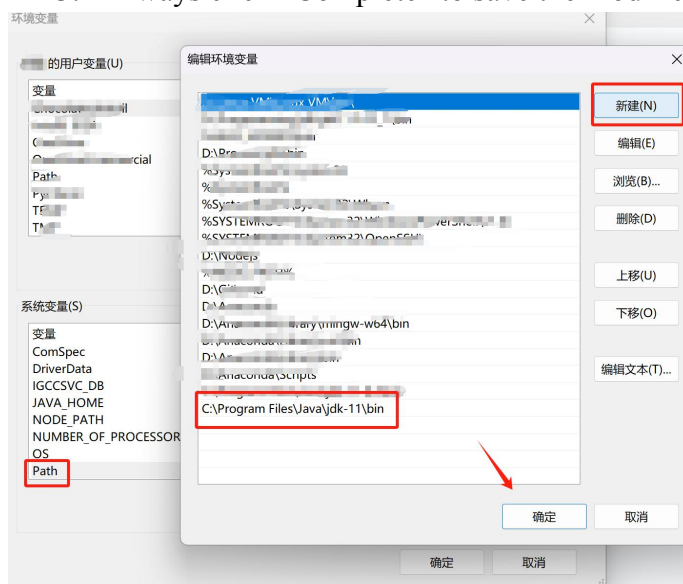
⁵ Zike Deng, Department of Computer Science, School of Computing and Data Science, University of Hong Kong; Email: baylordeng@connect.hku.hk



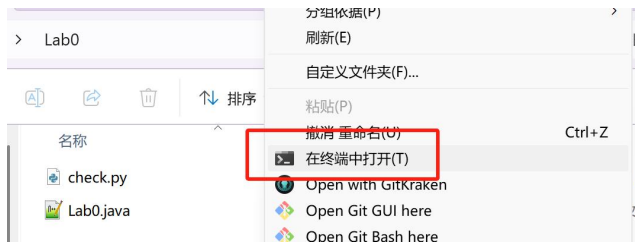
Click “Next” and complete the installation.

Then you need to add this path to environment variable, follow the following steps:

1. Click “New” to append a new item
2. Copy the installation path and add “\bin” at the end
3. Always click “Complete” to save the modification



4. Close the former window of terminal and restart a new one to retry `javac -version` command. If successful, go to the next step.
6. Open the Lab0 folder, right click and redirect to the terminal:



7. Run `python check.py`. If successful, you might see the results as follows.

```
PS C:\Users\...\Desktop\Lab0> python check.py

***** Compiling Java file: Lab0.java *****

✓ Compilation succeeded!

***** Running Java program: Lab0 *****

✓ Execution succeeded!
✓ Output is correct: I love you
✓ All checks passed!
```

MacOS

1. Open Terminal, run:
`/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"`
2. Then run:
`echo 'eval "$(/opt/homebrew/bin/brew shellenv)"' >> ~/.zshrc`
`source ~/.zshrc`
3. `sudo chown baylordeng:staff ~/.zshrc`
(replace baylordeng as your user name)
`brew install python`
4. Verify Installation: `python3 --version`

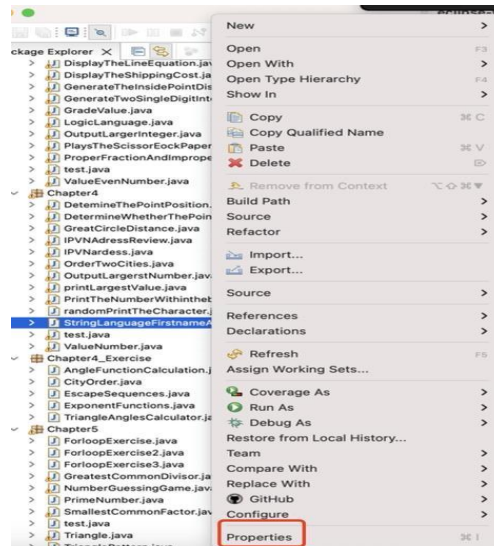
Step 3: Create a .java file in ellipse, paste following code:

```
package Lab0;

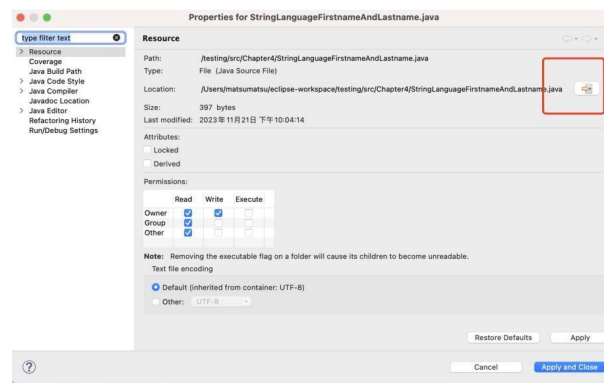
public class Lab0 {
    public static void main(String[] args) {
        System.out.println("I love you");
    }
}
```

Step 4: Export the code and check.py to a same folder in the desktop folder:

1. Find the target code file and click **Properties**



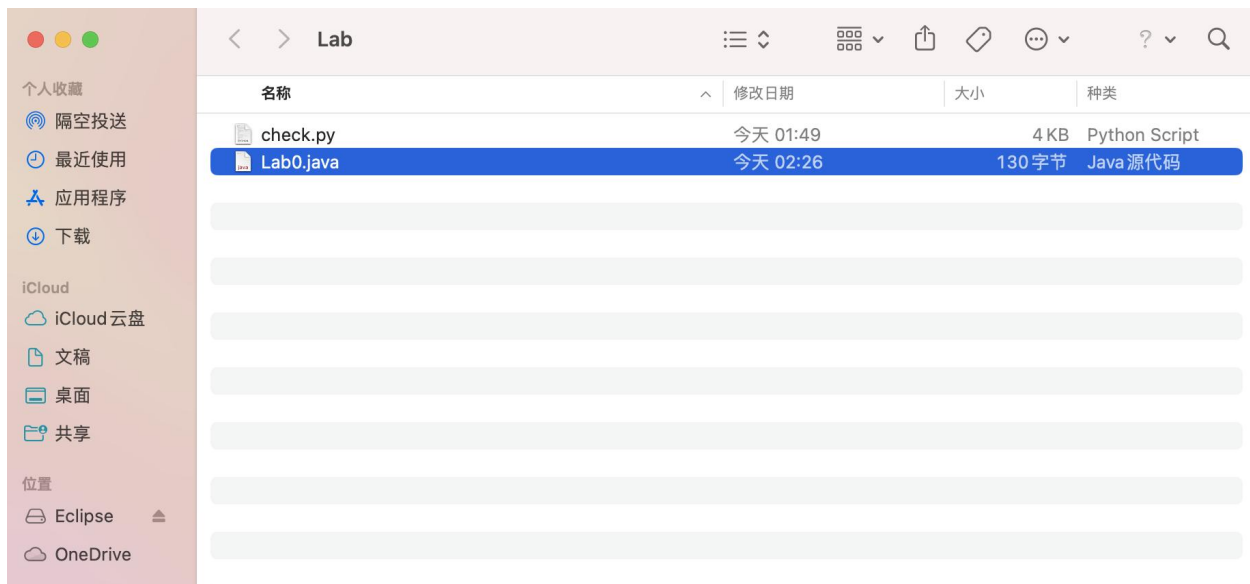
2. Find the Location and click the button.



3. When you jump to this frame and then copy and paste the file into the desktop target folder.

Chapter4			
名称	修改日期	大小	种类
DetermineThePointPosition.java	2023年11月4日 11:20	1 KB	Java 源代码
DetermineWhetherThePointIsInRange.java	2023年11月4日 10:21	853 字节	Java 源代码
GreatCircleDistance.java	2024年3月11日 16:46	1 KB	Java 源代码
IPVNAdressReview.java	2024年3月11日 16:46	808 字节	Java 源代码
IPVNArdess.java	2024年3月11日 16:46	1 KB	Java 源代码
OrderTwoCities.java	2024年4月1日 11:37	633 字节	Java 源代码
OutputLargestNumber.java	2023年11月3日 21:22	740 字节	Java 源代码
printLargestValue.java	2023年11月6日 17:04	927 字节	Java 源代码
PrintTheNumberWithintheboundary.java	2023年11月6日 17:30	705 字节	Java 源代码
randomPrintTheCharacter.java	2023年11月8日 10:53	401 字节	Java 源代码
StringLanguageFirstnameAndLastname.java	2023年11月21日 22:04	397 字节	Java 源代码
test.java	今天 00:04	1 KB	Java 源代码
ValueNumber.java	2024年3月11日 10:46	1 KB	Java 源代码

Finally, you should create this folder in your desktop successfully.



Step 5: Change the path to the folder, you can run following code in terminal:

```
cd /Users/baylordeng/Desktop/auto/Lab0
```

You should find your own file path and replace the path as your own.

Mac: You can use “**option**” button to copy the path

Window:

Then run: `python check.py`,

you might see following if successfully:

```
[(base) baylordeng@Mac Lab0 % python check.py

***** Compiling Java file: Lab0.java *****

[✓] Compilation succeeded!

***** Running Java program: Lab0 *****

[✓] Execution succeeded!

[✓] Output is correct: I love you

[✓] All checks passed!
```

Figure: Output Correct

```
[(base) matsumatsu@songprodeMacBook-Pro Lab % python check.py
```

```
***** Compiling Java file: Lab0.java *****
```

```
✓ Compilation succeeded!
```

```
***** Running Java program: Lab0 *****
```

```
✓ Execution succeeded!
```

```
✗ Output is incorrect!
```

```
Expected output: I love you
```

```
Actual output: I love you.
```

—
Figure: Output Incorrect

In the following labs, we will teach you again how to use check.py file to check your code. We will also add some zip functions to help you zip all necessary submission files, to help us check. You will see instructions in the following lab.