Introduction Lab – Week 1

Ensure you are enrolled on the Moodle page for this module

If you have not already enrolled in the module, do the following:

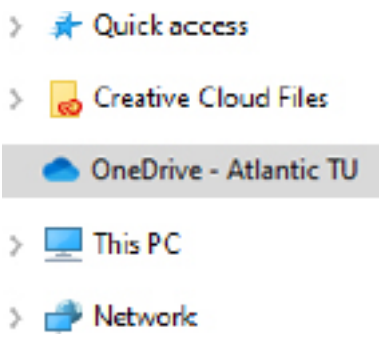
- Navigate to Moodle at vlegalwaymayo.atu.ie
- Log on to Moodle using your student ID and password
- In the "Search Courses" option, add the code for this module - 8881
- Enrol in the course.
- Once you are enrolled, you should see the page for the module (with a header similar to the header at the top of this page). You are now enrolled on the Moodle page for this module.

You should also ensure that you are enrolled in all other relevant Year 1 Software moodle pages:

Graphical User Interface and Web Development (8883)
Essential Mathematics for Computing (8886)
Introduction to Digital Graphics and Design (8888)

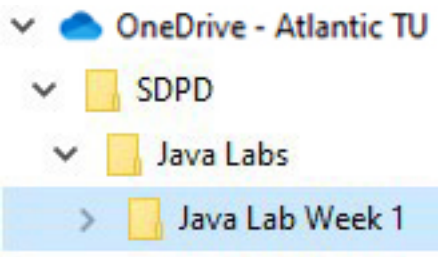
Login to your OneDrive service

Configure the OneDrive service by searching for "OneDrive" in windows search. You will be prompted for your email address – ensure you use your ATU email address. Once this is complete, you should have the OneDrive option on your PC as a save location:



Create a folder in this location called "Java Labs"

Inside this folder, create a new folder called "Java Week 1 Lab". You can create a new folder for each week as we progress through the semester, eg:



Make a note of this location, as this is where you should save your files for this lab.

Create a basic program in Java

Follow the instructions below. If you have any questions or difficulties along the way, ask your lab supervisor for assistance.

In this module you will be developing programs using the Java programming language. In this exercise you will write a simple Java program that will print text to the screen.

In this module, we will be using TextPad to write and run our programs.

Goal: Create a simple "Hello World" program in Java using TextPad. Ensure it compiles and runs successfully.

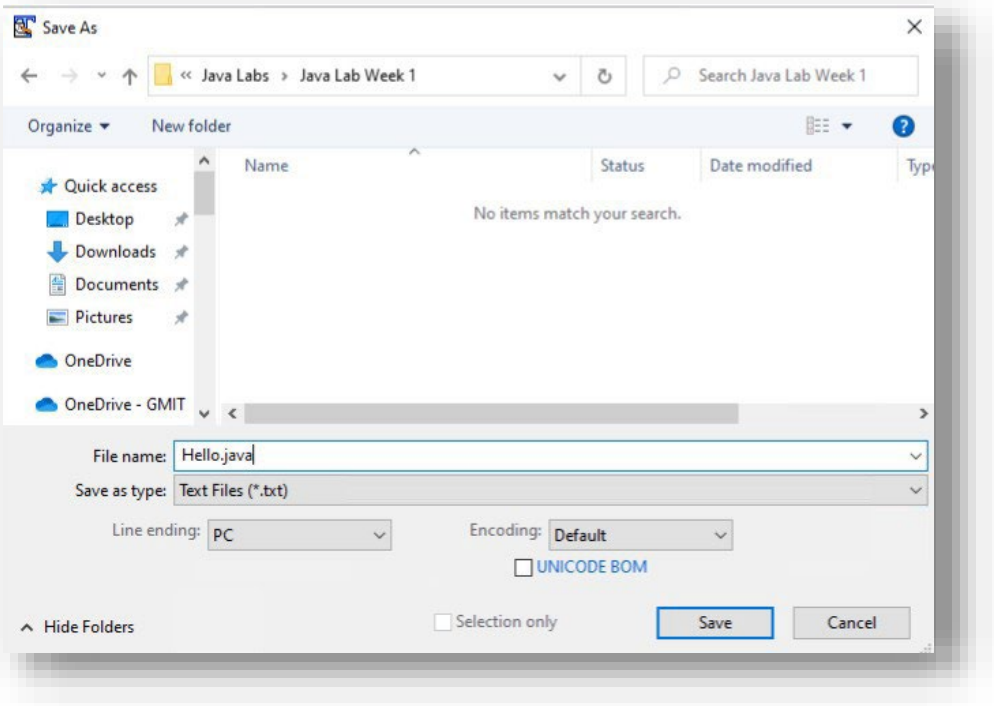
1. Launch TextPad by double-clicking on its icon on the desktop.

2. Once TextPad has started, enter the code as shown below:

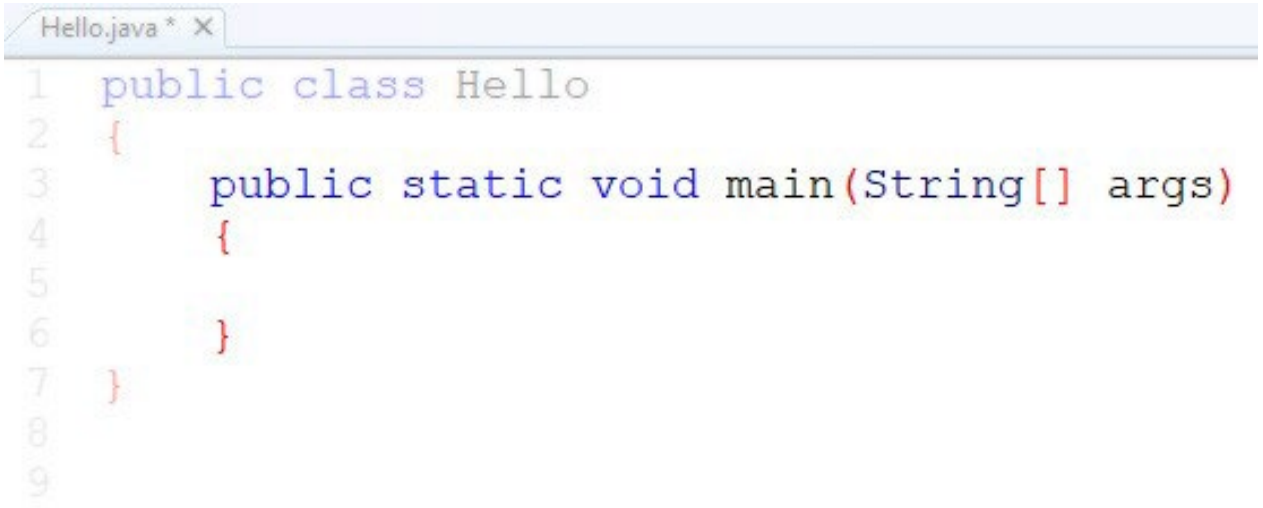
Hello.java *

```
1  public class Hello
2  {
3
4
5
6
7  }
8
9
```

*Note the opening and closing curly braces on line 1 and line 7, and that "Hello" has a capital letter H. Save the file by going to "Save", then save the file to your OneDrive folder created previously. Ensure you save the file with the filename **Hello.java**. (This **must** be the same as the name of the class specified in line 1)*



3. Add to the code as shown below so it displays as follows:



Note that the curly brace that opens on line 1 closes on line 7, and the curly brace that opens on line 4 closes on line 6.

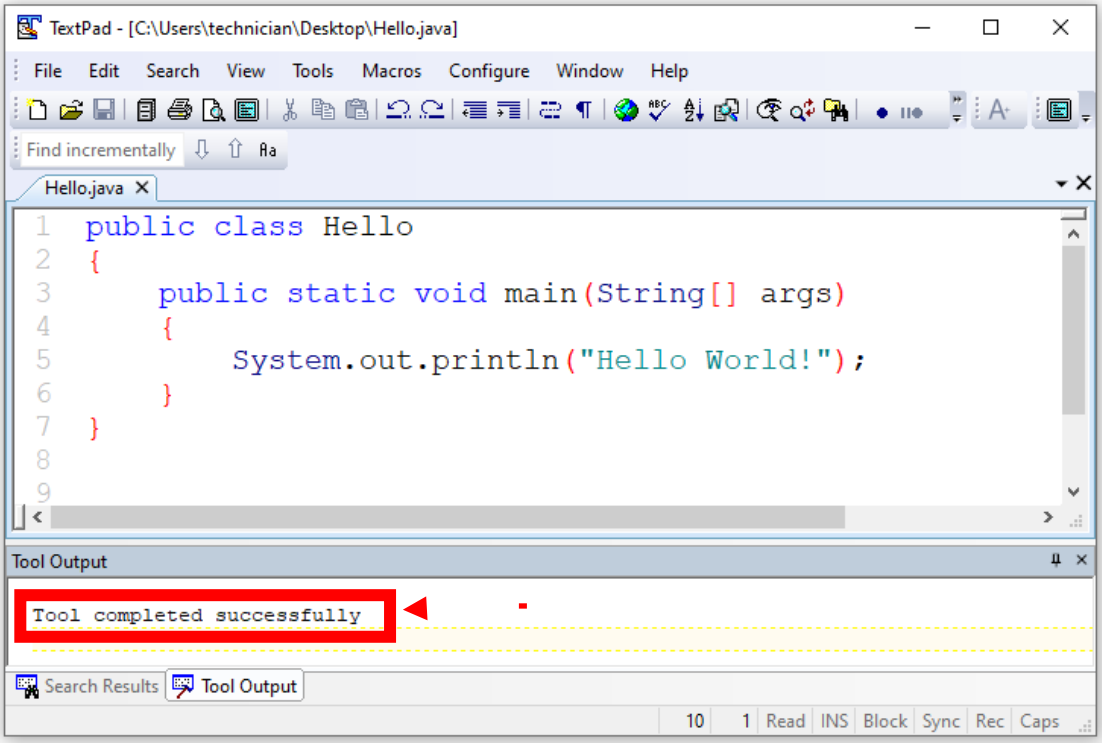
Curly brace: {

Square Bracket: [

Finally, you are now ready to add your code to get the program to print out to the screen. Amend your code so that it reads as follows:

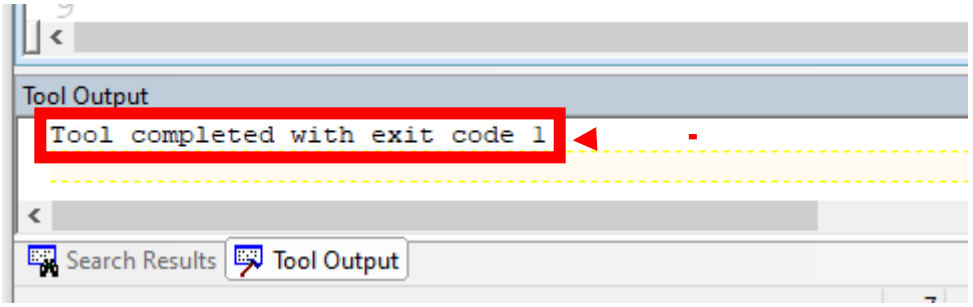
```
Hello.java *
1  public class Hello
2  {
3      public static void main(String[] args)
4      {
5          System.out.println("Hello World!");
6      }
7  }
8
9
```

You are now ready to compile your java code to bytecode. This step will convert your program code into *bytecode* so that the program can be run. Click on “Tools”, the select “Compile Java”. If your code was compiled without any errors, you should see the following message on the **lower left** of your monitor.



If your code compiled successfully, proceed to step 4.

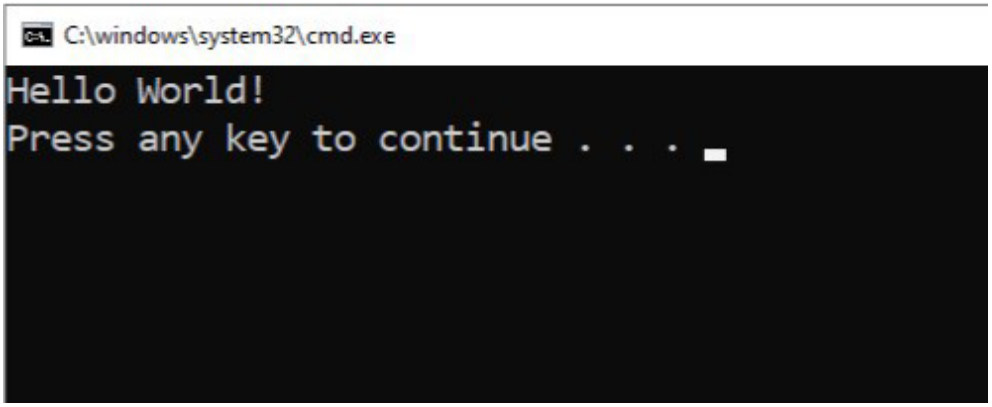
If your code does not compile - if you see a message denoting that an error has occurred, you will need to check that the code you entered matches the example given in **step 3** above.



After checking and correcting any errors, try compile your code again.
Ask your lab supervisor for assistance if it is still not compiling.

4. Execute your program, by selecting “Tools”, then “Run Java Application”.

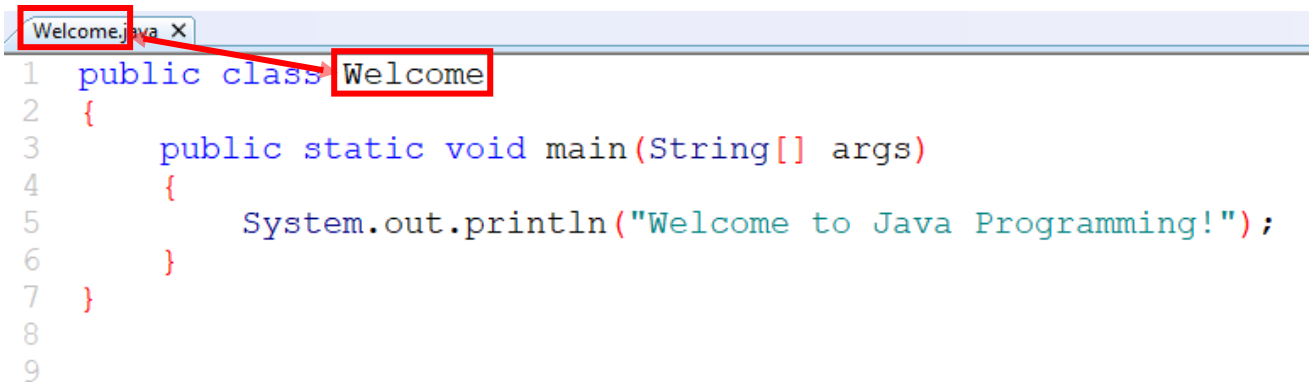
If your program works as expected, you should see output similar to as shown below:

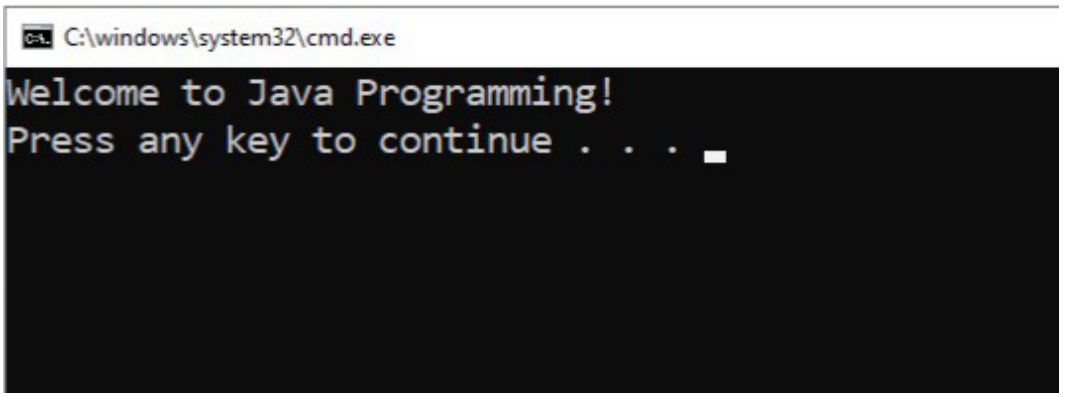


Exercise 2

Create a java program in a file called “Welcome.java” that outputs the line “Welcome to Java Programming!”

1. Ensure that the filename is called “Welcome.java” – and therefore the public class name must match this:





Exercise 3

Create a java program in a file called "Today.java" that outputs *2 lines* to the console screen.

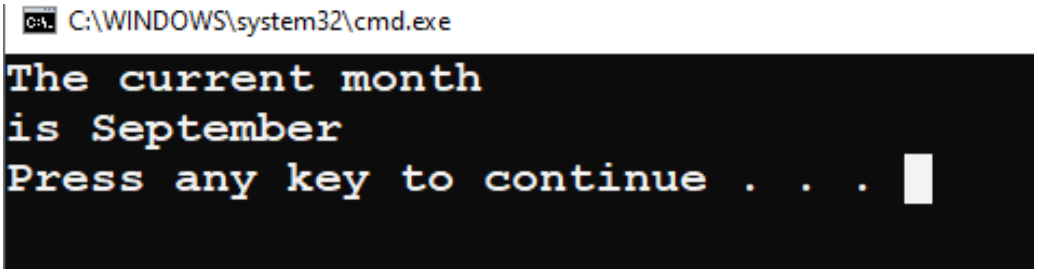
1. Ensure that the filename is called "Today.java" – and therefore the public class name must match this.

2. Write your code to include two lines of output, similar to as shown below:

Today.java

```
1  public class Today
2  {
3      public static void main(String[] args)
4      {
5          System.out.println("The current month");
6          System.out.println("is September");
7      }
8  }
9
10
```

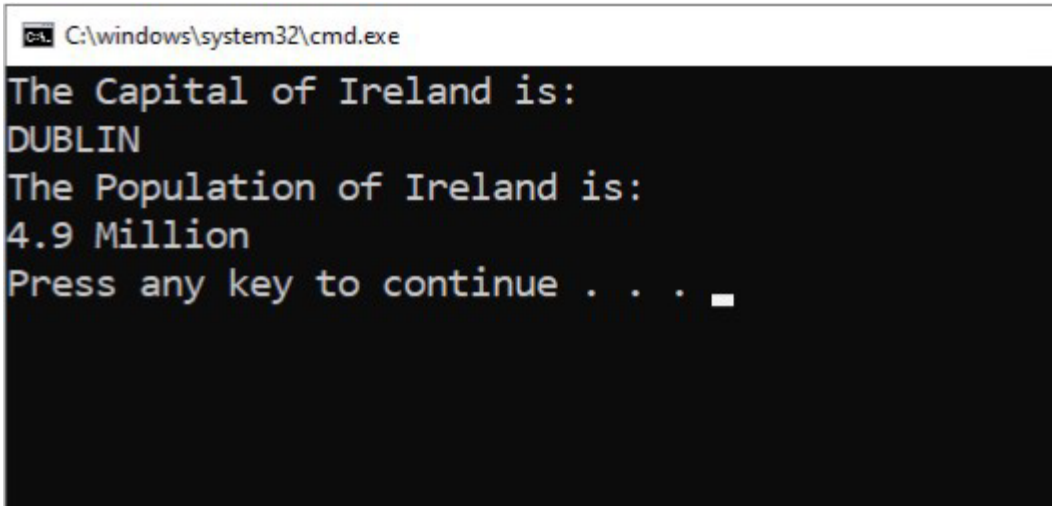
3. Compile and run your program – the output should be similar to as shown below:



Exercise 4

Create a java program in a file called "Multi.java" that outputs *4 lines* to the console screen.

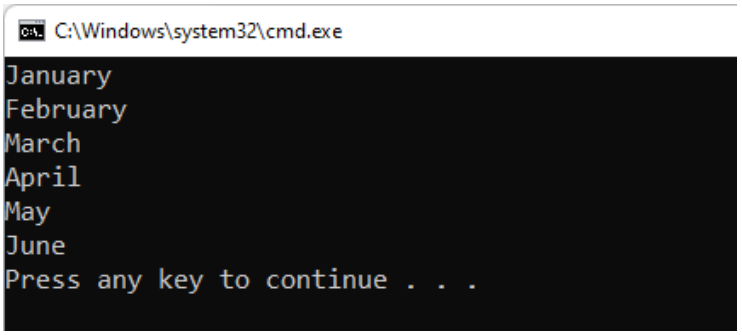
1. Ensure that the filename is called "Multi.java" – and therefore the public class name must match this.
2. Write your code so that the output is similar to as shown below:



Exercise 5

Create a java program in a file called "Months.java" that outputs *6 lines* to the console screen as shown below.

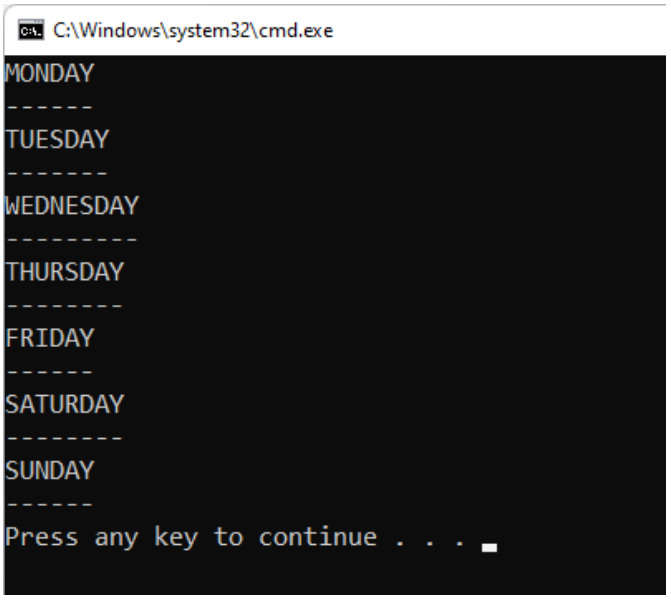
1. Ensure that the filename is called "Months.java" – and therefore the public class name must match this.
2. Write your code so that the output is similar to as shown below:



Exercise 6

Create a java program in a file called "Days.java" that outputs *6 lines* to the console screen as shown below.

1. Ensure that the filename is called "Days.java" – and therefore the public class name must match this.
2. Write your code so that the output is similar to as shown below:



Exercise 7

Create a java program in a file called "Square.java" that outputs *6 lines* to the console screen as shown below.

1. Ensure that the filename is called "Square.java" – and therefore the public class name must match this.
2. Write your code so that the output is similar to as shown below: