



THE UNIVERSITY OF
MELBOURNE

Workshop wk2

COMP90041 Programming
and software development

Zhe(Zoe) Wang





Poll Time





Contact

Email: zoe.wang1@unimelb.edu.au

Day	Start Time	Duration	Location
Wed	2:15PM	1h	Zoom
Thur	3:15PM	1h	Zoom
Fri	2:15PM	1h	Zoom

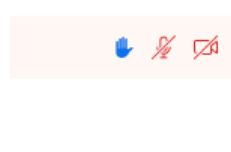
Slides and Demo code can be found in:

<https://github.com/Zoeewang/COMP90041-sem1-2021>



Before the tutorial

- Download Lab_wk2 Instructions in **Canvas**
- Raise your hand anytime
- Or post in the chat
- Turn on camera if you feel comfortable
- Questions?





Agenda

- Review & quiz & additional knowledge
- Lab questions
- (5-10 min block room chat)



THE UNIVERSITY OF
MELBOURNE

Review





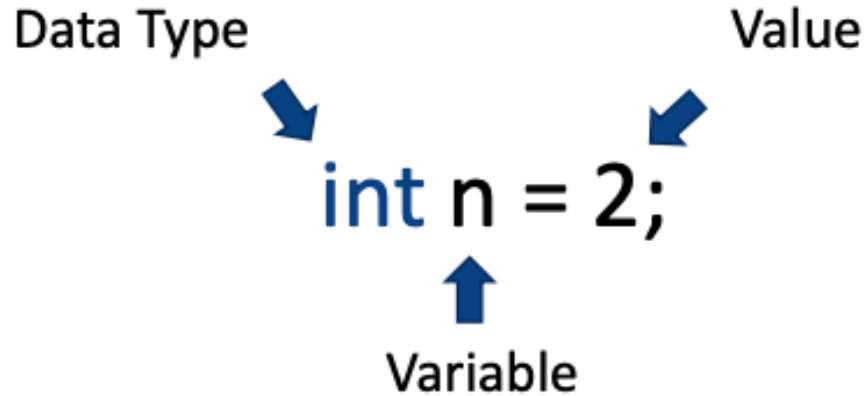
Java Code

- Java **program** is made up of one or more **classes**
- Java class is made up of zero or more **methods** and instance variables
- Java method is made up of zero or more **statements**.
- Filename must **match** the class name

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

```
HelloWorld.java x
1  /*
2   *
3   */
4  public class HelloWorld
5  {
6      /*
7       *
8       */
9      public static void main(String[] args)
10     {
11         String str1 = "Hello, World!";
12         System.out.println(str1);
13         method1();
14         method2();
15     }
16
17     /*
18      *
19      */
20     public static void method1()
21     {
22         System.out.println("This is method1");
23     }
24
25     /*
26      *
27      */
28     public static void method2()
29     {
30         int n = 2;
31         System.out.println("This is method" + n);
32     }
33 }
```

Variable Declaration & assignment



Or

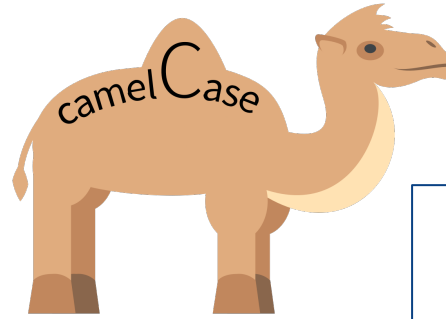
```
Int n; //declare  
n = 2; //assign
```


Variable Declaration & assignment

- Each variable must be **declared**, specifying its type before being used;
- Variable should be **assigned a value** before being used;
- You can combine declaration with initial assignment.

```
1  int a;  
2  int c = 3;  
3  a = 4;  
4  d = 5;
```

Variable Name Rules



- Variable names begin with a letter, and follow with letters, digits, and underscores (_)

- Begin with **lower** case letter

- Follow with lower case, except: **Capitalize** first letter of each word in phrase

- Make it **descriptive**

A

a
b
c

B

boxLength
boxWidth
boxHeight

C

1box
2box
3box

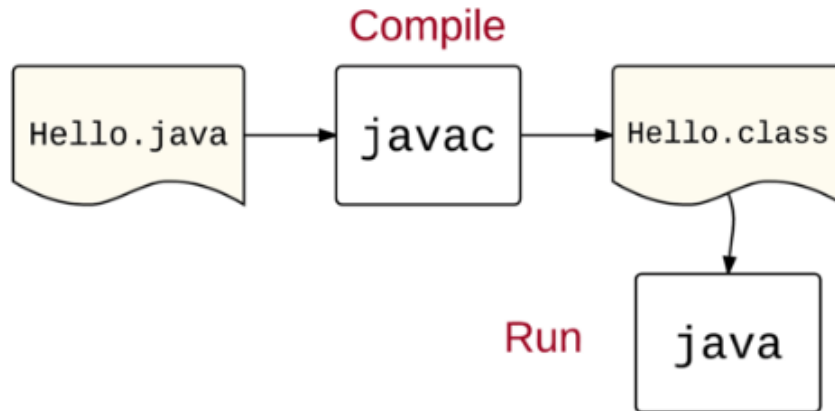
D

BoxLength
BoxWidth
BoxHeight

Compilation

- Before a java program can be run, it must first be **compiled** with the javac command
 - Checks the program obeys the rules of Java
 - Produces a .class file (if compiler passes)
- Once compiled, program is run using the java command

```
javac Hello.java
```



```
java Hello
```



Write Java Code

Integrated Development Environment (IDE)

or text editor (vim in Linux)



Linux

- **create a directory**

```
mkdir COMP90041
```

- **change to that directory**

```
cd COMP90041
```

- **List Files**

```
ls
```

- **create a file**

```
touch Hello.java
```

- **use vim editor**

```
vim Hello.java
```

exit: **control + C**

insert: **i**

save and quit: **:wq**



THE UNIVERSITY OF
MELBOURNE

Lab Exercise





Compile & Run

Step 2 : Setting up your environment

- **create a directory**

```
mkdir COMP90041
```

- **change to that directory**

```
cd COMP90041
```

- **List Files**

```
ls COMP90041
```




Q1

Write a java program : Compile & run!

Write a Java program that displays your name, address and telephone number each on a separate line.

- **javac firstProgram.java**
- **java firstProgram**

Q2

2. Write a Java program that declares and initialises a String variable "Hello, World!". Print out the variable on a line by itself. Then, using the String methods discussed in Chapter 1, print out the same string in ALL UPPERCASE on a line by itself.

```
Hello, World!  
HELLO, WORLD!
```

toUpperCase()



THE UNIVERSITY OF
MELBOURNE

Thank you

