

Section 3 First Setup

Topics:

1. Hello Word Project
2. Main Method
3. Running the Program
4. Printing in JAVA
5. Variables
6. Primitive Types
7. Casting
8. Operators
9. Logical Operators
10. Ternary Operator

Hello Word Project

New Project:

Src-> right click -> new -> java class

Main Method

Entry point for any java code

Running the Program

Click on the triangle button on the left side or right click and then select run

Exit code 0: means everything run successfully.

Printing in JAVA

```
System.out.println("Hello Gold");
```

Sout + enter = System.out.println(); (keyboard short cut)

```
int myFirstNumber = 5;
```

```
System.out.println("myFirstNumber " + myFirstNumber);
```

Variables

To define a variable, we need to define the data type and a name.

Primitive Types

Boolean, byte, char, short, int, long, float, double

byte -128 to 127 (8 bits = 1 byte, width = 8)

short -32768 to 32767 (16 bits, width = 16)

int -2147483648 to 2147483647 (32 bits, width = 32)

long -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807

float $3.40282347 \times 10^{38}$, $1.40239846 \times 10^{-45}$

double $1.7976931348623157 \times 10^{308}$, $4.9406564584124654 \times 10^{-324}$

char only stores a single character e.g., char myChar = 'd'; (16 bits, width = 16)

boolean true and false

string

DON'T FORGET the L in long and F in float

long myLongValue = 100L;

float myFloat = 5.25f;

char Unicode

char myChar = 'd';

char myCharUniCode = '\u0044';

Casting

Converting a number from one type to another

byte newByte = (byte) (minByte / 2);

(minByte / 2) = byte/int = int (thus the casting)

Operators

int result = 5;

result++; // 5+1

```
result--; // 5-1
```

```
result +=2 // result = result + 2;
```

Logical Operators

== Equal

!= Not Equal

&& AND

|| OR

&& VS &

&& Logical AND which operates on Boolean operands

& bit wise AND working at the bit level

|| VS |

|| Logical OR which operates on Boolean operands

| bit wise OR working at the bit level

Ternary Operator

condition ? expression1 : expression2.

Bool isCar = true;

Bool wasCar = isCar ? true : false;

Int age = 20;

Bool isOverEighteen = (age == 20) ? true : false;

Operator Precedence

Just use brackets or google it