

L2

Introduction to [lang]

Writing our first program

Java → OOPs → class
 └→ object

Rule 1 → class

Main.java

Soksham.java

```
class Main  
{  
    →  
    →  
    →  
}
```

word
google

```
public class Main
```

```
{
```

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

```
{
```

```
    System.out.print ("Hello ");
```

```
    System.out.println ("World");
```

```
}
```

HelloWorld

```
}
```

→ 1

✓ Static function



No objects are
required



static

Non-static
function



Objects are
required



non-static

4th week

5 → value

A ↑

↓

variable name

type?

Variables

↓

Containers

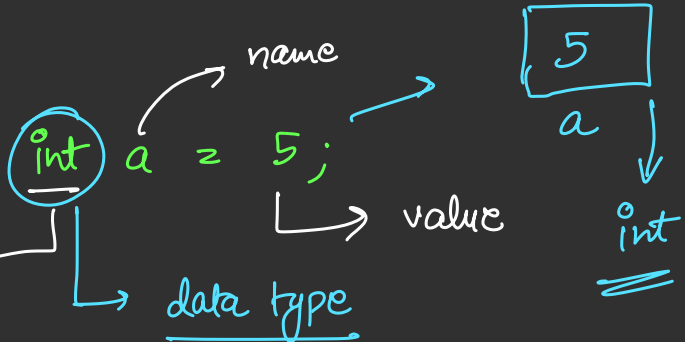
A + B

↓

5

↓

6



float a = 5.0;



⑤ → number / integer
↳ int

5.0 → decimal

5.0 → float

a

↳ float / double

double b = 7.5;

7.5

b ↳ double

Data types

int \leftarrow 5
b

int \rightarrow 4 bytes

$\rightarrow -2^{31} 10^9$ to $2^{31} 10^9$

\rightarrow -ve, +ve

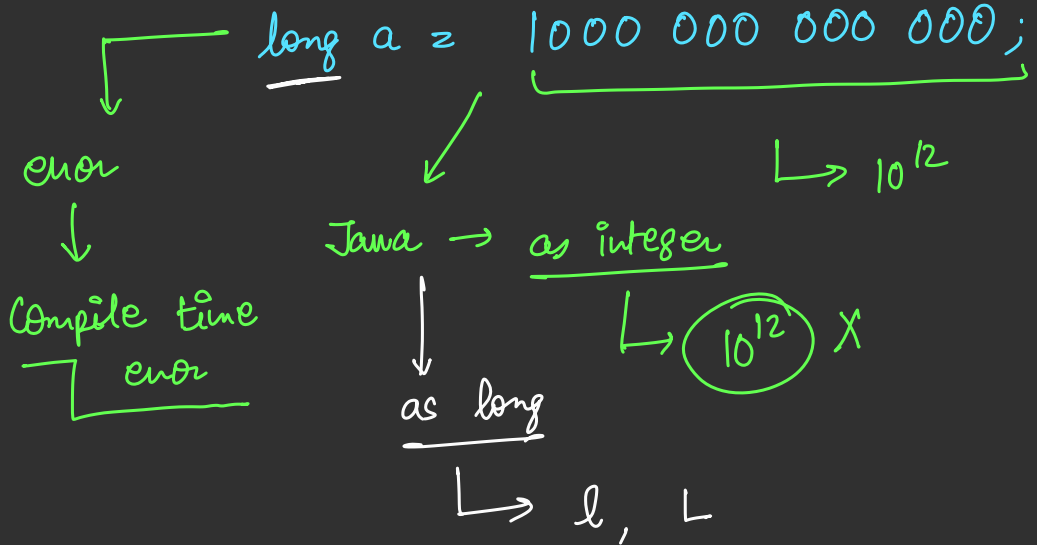
int b = 5;

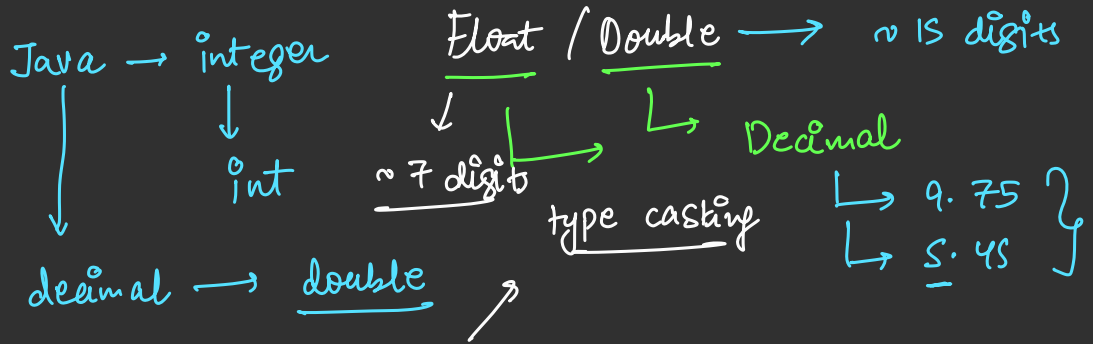
long a = 5;

long \rightarrow 8 bytes

$\rightarrow -2^{63} 10^{18}$ to $2^{63} 10^{18}$

5
a \uparrow
 \swarrow
long





float a = 9.75; → error

B / F

float a = 9.75F;

double a = 9.75; → d/p

boolean datatype.

↓
true / false

char x = 'y';

↓
single
quote

↓
'yz'

different
data type

String a = "Saksham Anora";

boolean a = true;

$a \% b$
 $a < b$
↓
Ⓐ

true → boolean
a

→ $5 \% 6$

int
5 / 6
└ 0

6 | 5 | 0
- 0
→ 5

Remainder

Operators

Arithmetic Operator & Assignment Operator

$+$, $-$, $*$, $/$, $\%$

`int a = 15;`

`int b = 6;`

↓
Remainder

↓
`int a = 5;`

`double b = 5.5;`

$$\textcircled{2} \quad \textcircled{\text{int}} \quad c = a/b \rightarrow \frac{15}{6} = \textcircled{2}$$

$$\begin{array}{r} 6 \overline{) 15} \\ \underline{-12} \\ 3 \end{array}$$

$$\xrightarrow{\text{a/b}}$$

$$\xrightarrow{\text{a \% b}}$$

Operators

Relational and Logical Operator

$a = 5$

$b = 6$

boolean

$a < b \rightarrow \text{true}$

$a > b \rightarrow \text{false}$

$a < = b \rightarrow \text{true}$

$a > = b \rightarrow \text{false}$

$a == b \rightarrow \text{false}$

$a != b \rightarrow \text{true}$

$5 < 5$

↓

false

$5 < = 5$

↓

true

!(a > b) → false

(a > b)

↓
false

int a = 10;

int b = 15;

int c = 10;

true

||

a == c

↓
true

OR → either one of them
is true

C1	C2
T	T
T	F
F	T
F	F

C1 C2
T
T
T
F

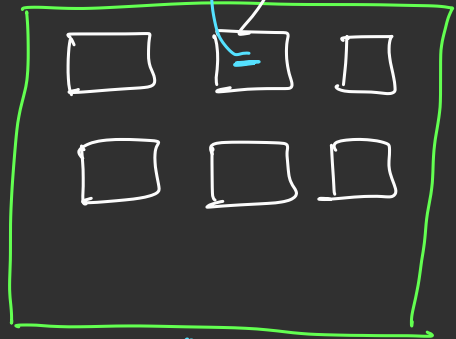
Taking Input

In Java - we use Scanner class

Scanner

util

```
class Main
{
    main function
    {
        →
        →
    }
}
```



Java

```
import java.util.Scanner;
```

2) Object creation

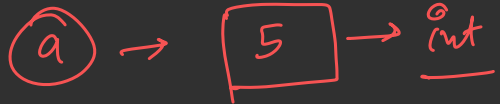
↳ Scanner in = new Scanner (System.in);

3) Functions

↳ in.nextInt()

in.nextLong();

int a = in.nextInt();



in. next Float (); } → Decimal

in. next Double ();

in. next (); → word

in. nextLine () → sentence

in. nextBoolean () → true / false

Type Casting

Implicit Type Casting



By default

```
int a = 10;  
long b = a;
```



smaller
↓
bigger

Explicit Type Casting



Bigger →
Smaller

```
[ long a = 10;  
  int b = a;
```



```
int b = (int) a;
```



Homework Question

1. Enter two numbers and perform all arithmetic operations
2. Enter P, R, T and calculate simple interest.

Next Class Plan

1. Conditional Statements
2. Loops
3. Some Practice

Thank You!

Reminder: Going to the gym & observing the trainer work out can help you know the right technique, but you'll muscle up only if you lift some weights yourself.

So, PRACTICE, PRACTICE, PRACTICE!