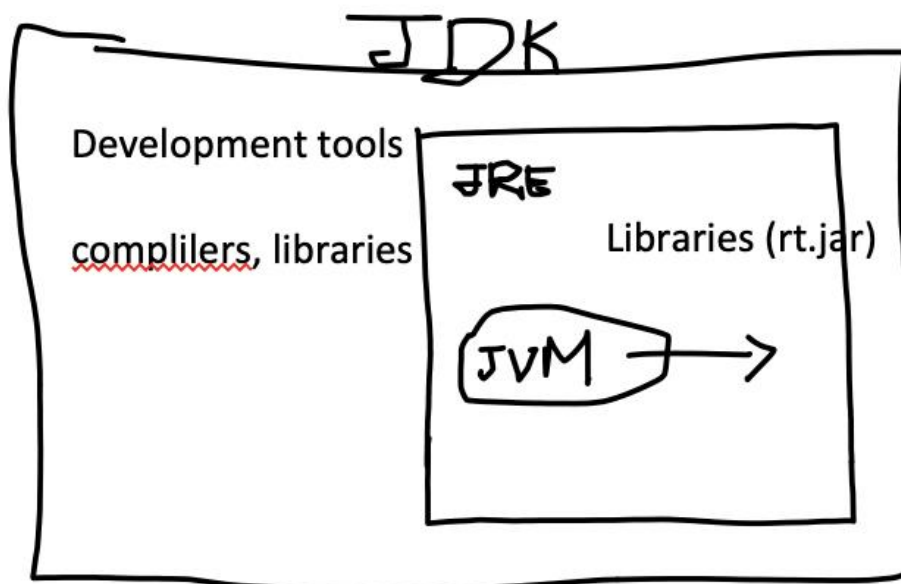
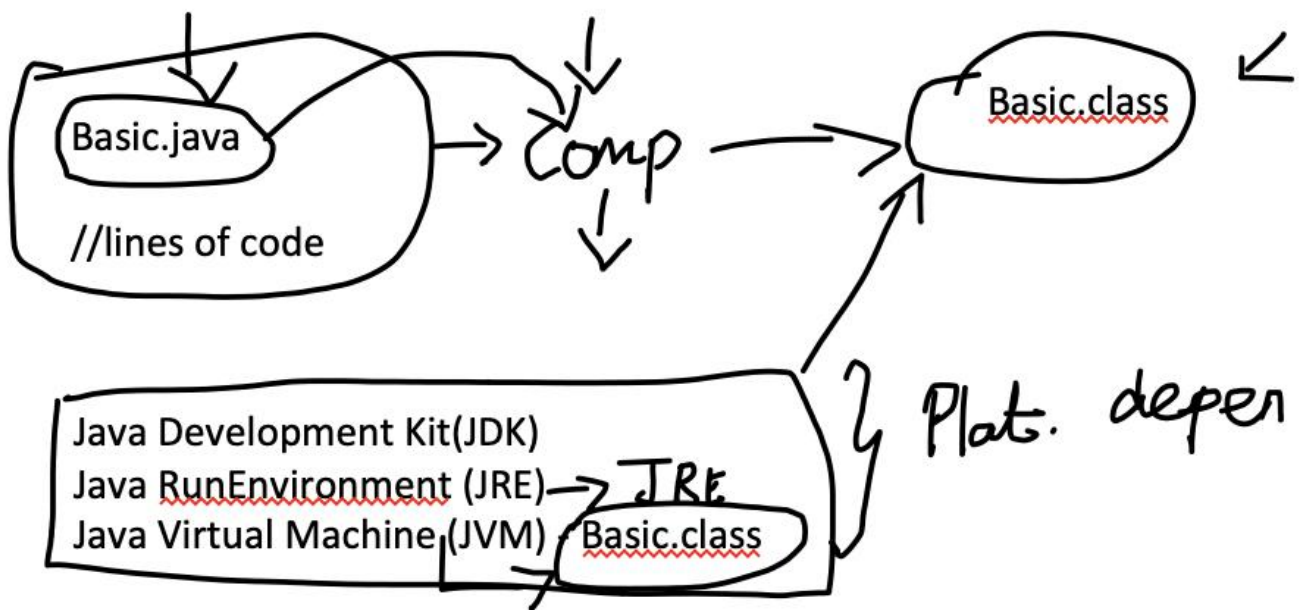


Introduction to Java - Basics

Tuesday, 12 October 2021

8:50 PM



Java Structure

Basic.java

```
public class Basic {  
    public static void main(String[] args) {  
        System.out.println("Hello World!");  
        //create an object  
    }  
}
```

termination

Access_modifier static return_type method_name(arguments) {

← Obj

Basic obj = new Basic();

Conditional Statements - If, If-else, If-else if

```
int num = 50.4;  
char operation = "s";  
if(operation.equals("add")) {  
    if(condition) {  
    }  
    System.out.println("ADD by 2");  
} else if(operation.equals("mul")) {  
    } else if("div") {  
    }  
}
```

DataTypes

//number = 2, 50, 0.76, 2.78888, -5

//words/sentences/letters = "xyz", "add"

Primitive Data Types & Non-primitive Data Types

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

int = -2,147,483,648 to 2,147,483,647 - 32 bits

byte = -128 to 127 - 8 bits

char = 'a', 'b', - 16 bits 0 to 255

short = -32,768 to 32,767 - 16 bits

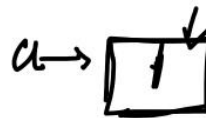
long = 64 bits

float = 13.455667 - 32 bits

double = 1.4534635633565 - 64 bits

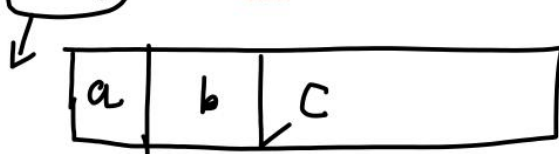
boolean = true or false - 1 bit

int a = 1



Non-primitive data-type

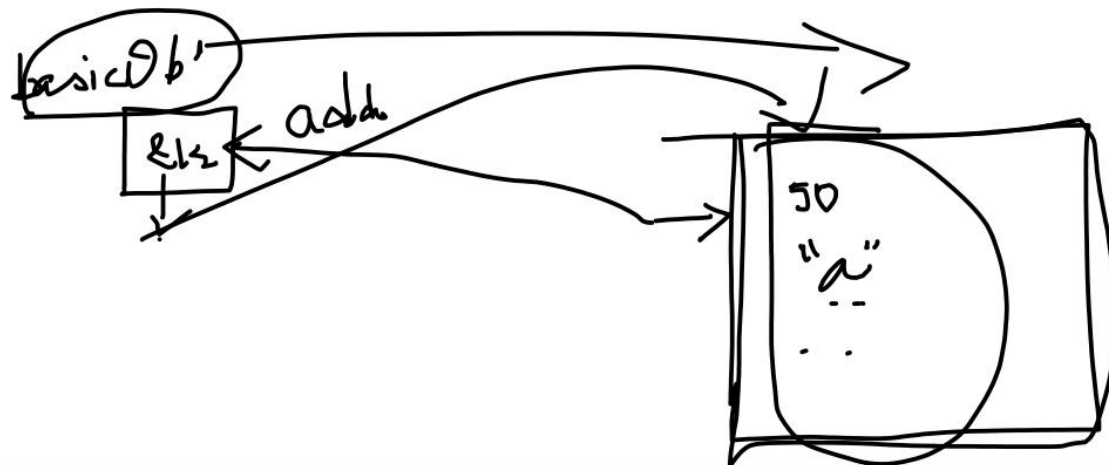
String name = "abc"



Integer - int

Long

Basic basicObj = new Basic();



Operators

Arithmetic - +, -, *, / int a = 5, int b = 5;

boolean c = a != b //true

Relational Operators - <, >, >=, <=, ==, !=

Ternary Operator - ? :

boolean isEven = (a %2 == 0) ? System.out.println("even") : System.out.println("odd");

Assignment Operator

=, +=, -=, /=, %=, >>=, <<=

int a = 5;

A += 4; // a = a + 4;

-= //a = a-4;

*= //a = a*4;

Bitwise operator - &, ^, |

int a = 5 - 0101

int b = 7 - 0111

a & b - 0101 - 5

A | b = 0111 - 7

a^ b = 0010 - 2

[3,0,1] - 0 to sizeofArray output = 2

[9,6,4,2,3,5,7,0,1] = 0 to 9 = output = 8

Shift Operators = >>, <<

```
int a = 10;  
int b = 2;
```

$10 \ll 3 - (10 * (2^3)) = 80$
 $10 \gg 2 - (10 / 2^2) = 10 / 4 = 2$

Unary Operators - ++, --, !

```
int a = 10;  
int b = 12  
int a = 12;  
System.out.println(a++ + ++a); //(10 + 12) - 22
```

$(b++ + b++) // (10 + 11) // 21$
 $a++; \quad ++a;$

10	11
----	----

```
Boolean c = true;  
System.out.println(!c)
```

```
int a = 10;  
int b = 1;  
System.out.println(!(a < b));
```