Data Type

- Primitive
- Non Primitive

① Numeric

ⓐ Non Decimal

i. byte → 1 byte = 8 bit
ii. short → 2 byte = 16 bit
iii. int → 4 byte = 32 bit
iv. long → 8 byte = 64 bit

msb → 0 +ve
1 -ve

8 - 1 = 7

-2^7 to 0 to $2^7 - 1$

lowest
-128 127

ⓑ Decimal

i. float → 4 byte
ii. double → 8 byte

② Char → 2 byte → unicode

③ boolean → 1 byte True / False

Operators

- Unary — Operand operator
- Binary
- Ternary

Binary → operand (operator) operand

Value True / False

Value

Arithmetic

n_1 (11) * n_2 (3) = 33

n_1 (11) / n_2 (3) 3

n_1 % n_2 2

n_1 + n_2 14

n_1 − n_2 8

True / False

Relational

$n_1 > n_2$ True

$n_1 < n_2$ False

$n_1 >= n_2$ → True (True)

$n_1 <= n_2$ → False (False)

$n_1 == n_2$ False

$n_1 != n_2$ True

Logical

&&

||

!

```
int n1 = 11;
int n2 = 3;
```

3 → Quotient (/)

3) 11

9

2 → Remainder (%)

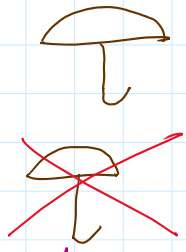
Statements

① Sequential

```
package com.sprk.day1;

import java.util.Scanner;

public class Input1 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        // variable declaration
        int age;

        System.out.println("Enter your age:");
        age = sc.nextInt();

        System.out.println("Your age is "+age);
    }
}
```

② conditional / Decision Making

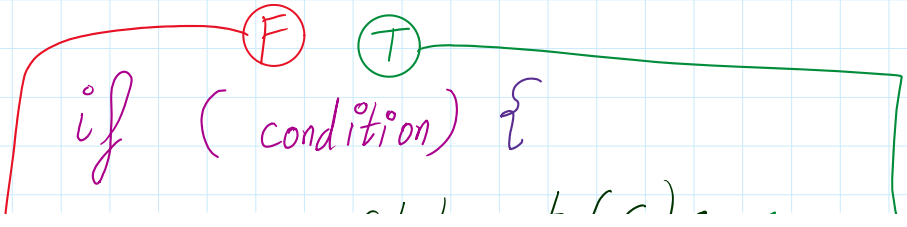
If rain

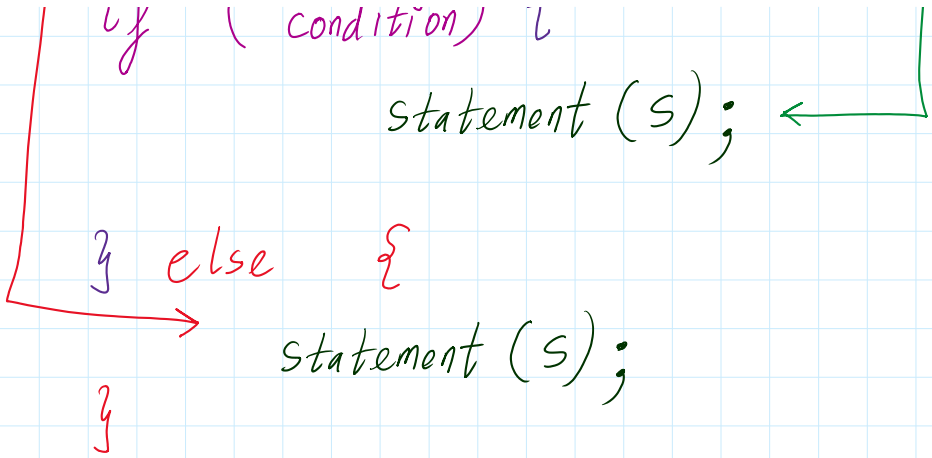


else

ⓐ if else

ⓑ switch case




if (condition) {
statement (s);
} else {
statement (s);
}