⇒ Variables

↳ Imagine a variable as bucket/container which is used to store data.

⇒ Data Types (Primitive) :-

- ↳ int :- 1, 10, 15, -15, 0...
- ↳ char :- 'a', 'Z', '1', '+', ...
- ↳ boolean :- true, false
- ↳ float :- 2.3, 5.4, -2.4, ...
- ↳ double :- 3.20547, ...
- ↳ short :- numbers
- ↳ long :- numbers
- ↳ byte :- numbers

Ex :-

declare a variable (Syntex)

```
data_type variable_name = value ;
```

assignment operator

```
int a = 5 ;
char b = 'k' ;
boolean c = false ;
double d = 7.434242 ;
```

keyword

⇒ Operators

1) Airthematic operators

+ , − , * , / , %

ex:- 2 + 5

5/5

2*5

5 - 2

2) Assignment operator

```
int a = 5;
```

3) Relational operator

ex:- `>` , `<` , `>=` , `<=` , `==` , `!=`

```
5 > 2   ⟶ true
5 >= 5  ⟶ true
7 == 2  ⟶ false
7 != 7  ⟶ false
2 < 1   ⟶ false
```

Note :-

`=` :- assignment

`==` :- relational

4) Unary Operators

`+` , `-` , `++` , `--`

```
int a = 5;
```

- `a++` value will be 6
- `a--` value will be 5

[postfix inc./dec.]

- `++a` value will be ↑ed
- `--a` value will be ↓ed

[prefix inc/dec.]

↳ Ternary operators

↳ Logical operators

Sum and Difference of x and y

```java
import java.io.*;
import java.util.*;

public class Solution {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int x = scn.nextInt();
        int y = scn.nextInt();

        int sum = x + y;
        int diff = x - y;

        System.out.println(sum);
        System.out.println(diff);
    }
}
```

scanner class (used to take input from user)

Area and Perimeter 5

```
int length = 10;
int breadth = 20;

int area = length * breadth;

int perimeter = 2 * (length + breadth);
```

```java
public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int length = scn.nextInt();
        int breadth = scn.nextInt();

        int area = length * breadth;
        int perimeter = 2 * (length + breadth);

        System.out.println(area);
        System.out.println(perimeter);
    }
}
```

Fahrenheit and Celsius

double f = 32.0;

double c = (f - 32) * 5/9

= (32.0 - 32) * 5/9 = 0.0

code

```
public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        double f = scn.nextDouble();

        double c = (f - 32) * 5 / 9;

        System.out.println(c);
    }
}
```

Add Last Digits

int a = 1234 ;

int b = 22 ;

ans = 4+2 = 6

Note

a = 1234

digit1 = a % 10 = 4

$$10\overline{)1234}\,(123$$
$$-1230$$
$$4$$

code

```java
public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int a = scn.nextInt();
        int b = scn.nextInt();

        int digit1 = a % 10;
        int digit2 = b % 10;

        int ans = digit1 + digit2;
        System.out.println(ans);
    }
}
```