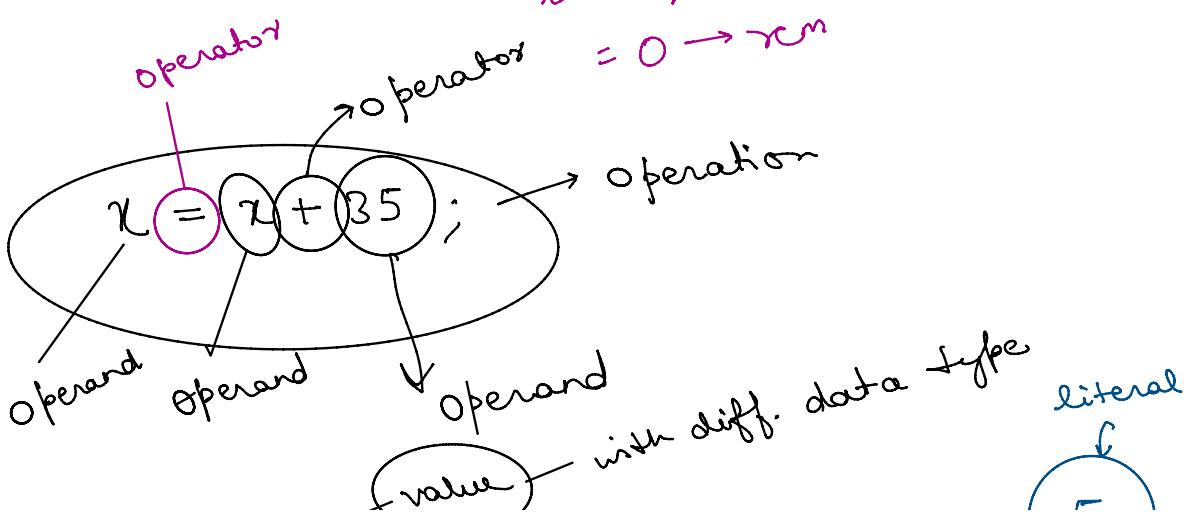


- Modulo %

$$\begin{array}{r}
 & \text{quotient '}' \\
 5 \longdiv{1213} & \\
 \underline{10} \downarrow \downarrow & \\
 21 \\
 \underline{20} \\
 13 \\
 \underline{10} \\
 3 \rightarrow \text{remainder}
 \end{array}
 \quad 1213 \% 5 \rightarrow 3$$

=	$x = 5$	$x = 5$ <i>assigning</i>
$+=$	$x += 3$	$\checkmark x = x + 3$
$-=$	$x -= 3$	$\checkmark x = x - 3$
$*=$	$x *= 3$ ✓	$x = x * 3$
$/=$	$x /= 3$	$\checkmark x = x / 3$
$\% =$	$x \% = 3$	$x = x \% 3$

$$\begin{aligned}
 x &= 78 \\
 x &\leftarrow 78 + 3 \\
 x &= 81 \checkmark \\
 x &= 81 - 3 = 78 \\
 x &= 78 \\
 x &= 78 * 3 \\
 x &= 234 \\
 x &= 234 / 3 \\
 x &= 78
 \end{aligned}$$



Literals & Variables

- Literal are fixed value that we can directly used in our program
Eg: 5, 2.3, 'c', "Krishna";

Types of literals

- Integers → Numerical value without any decimals.
Eg → 1, 4, 99, 6953, -24,

- floating point Number → A value that contain decimal value.

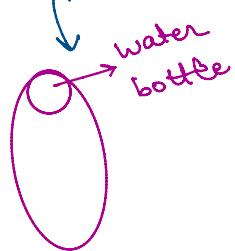
Eg → 1.0091, -3.2, etc.

- character → inside a single quotes.
↳ 'a', 'c', '+', '&'

Variables

- They are used to store data so that we can use them in the later program.

liquid



- Variable name
- data type .

to store
only the
integer type
of value

int age;

variable name

data-type

Memory

age = 24

{ int age;
 age = 24; }

declaration

initialisation

int age = 24;

assigning the value
at the time of
declaration.

float laptop = 299999.99;
double mobile = 51999.09;

variable

float laptop

double mobile

float & double
can store decimal
value.

✓
food = 35 kg
fruits = 5 kg

1st box

10 kg

✓
2nd box
50 kg

float → 1st box
double → 2nd box
bigger store
• decimal

```

int age = 24; ✓
System.out.println("age(before): " + age);
age = 18; ✓
System.out.println("age(after): " + age);

```

Memory

age = 24
18

age(before): 24 ✓
age(after): 18 ✓

Rules for Naming a Variable

- A variable name consist of alphabets, digits, \$, _
- A variable name can't start with a number.
- A variable name can't be a keyword

Eg → double, int, static, void, main, system.
reserved predefined word in Java programming

Eg - 1 salary, Salary, \$salary, hello_world

salary \$ credited, total salary
no space allowed

Challengers....

11) Store the value 100 in x variable of int data type and then print x.

12) Store the value 235 in y variable of int data type and then print y+10

13) Store values 165, 84 in x and y variable of int data type and print x+y, x-y, x*y, x/y.

14) Store values 20, 30, 40 in the variable x, y, z each of int data type and print x+y-z.

15) Remove the last digit of a given number. Say 45983

16) Find the last digit of a given number. Say 45983

int z = 45983;

System.out.println(z/10); → quotient

System.out.println(z%10); → remainder

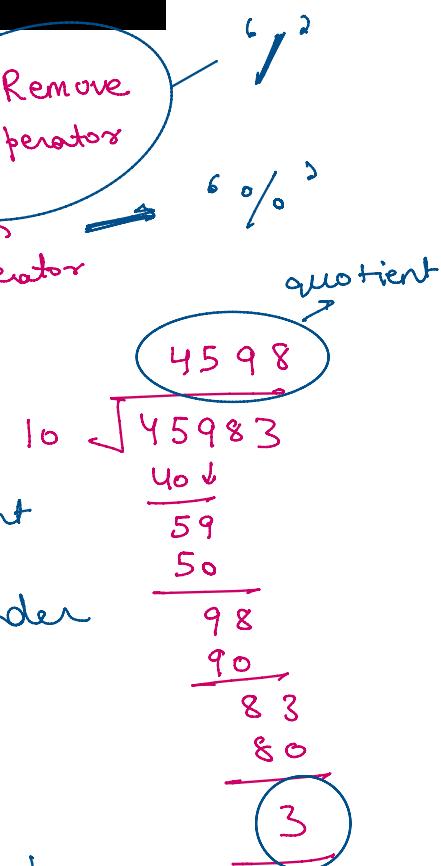
Character Value

'char' → data type that is used to store character value.

char alphabet = 'c';

System.out.println(alphabet);

Boolean → true / false



```

boolean result1 = true;
boolean result2 = false;

System.out.println(result1);
System.out.println(result2);

```

Summary of Data Types

Types	Used for
• int	→ Integer value
• double	→ decimal value
• float	→ character value → using single quotes
• char	
• boolean	→ true / false

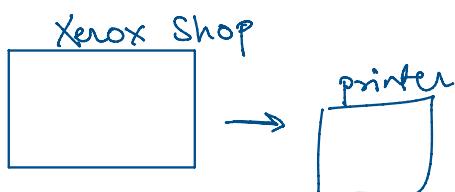
#

$$x = 24$$

• printing

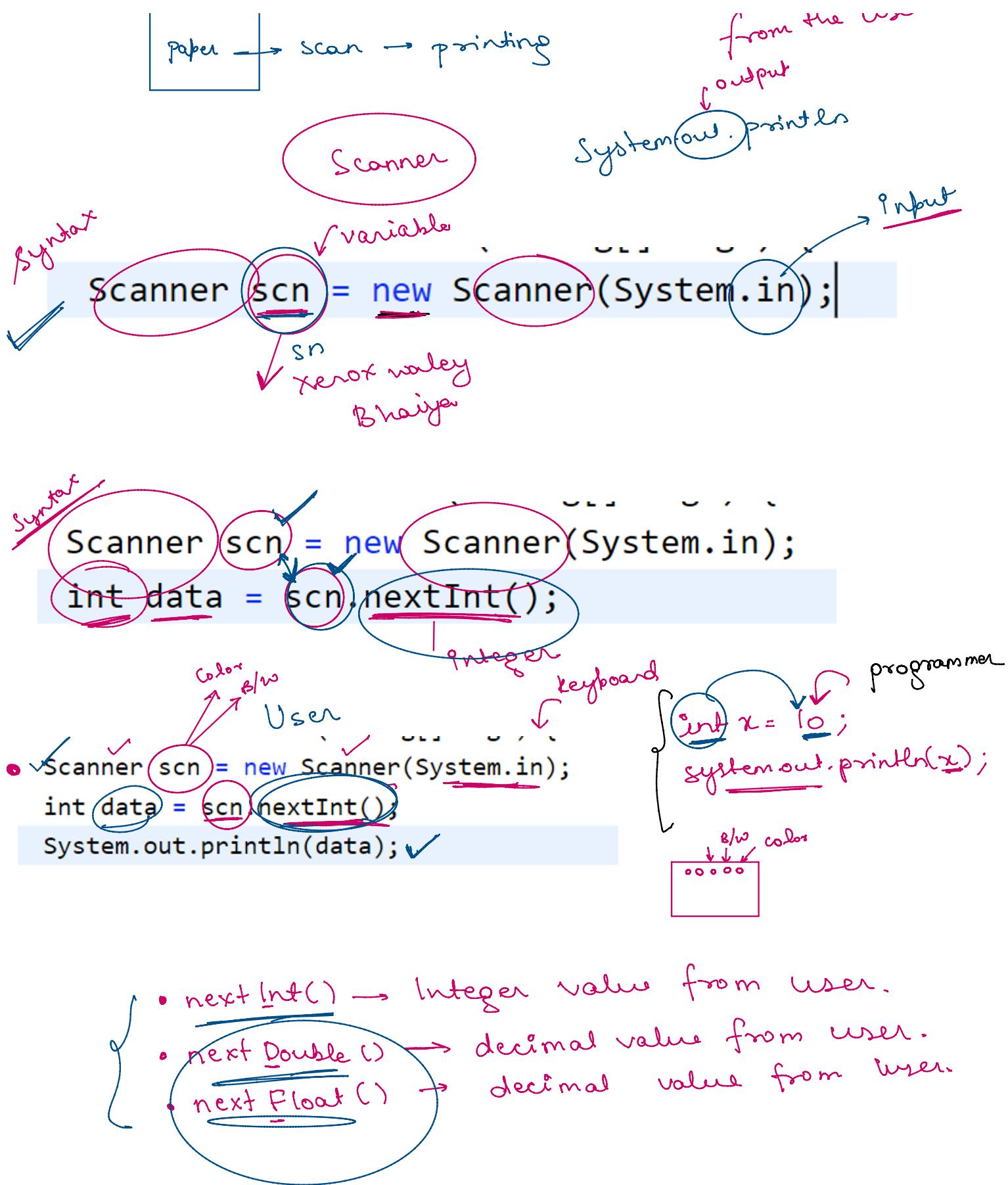
programmer → that manner

why don't user
give us any input



Scanner
Paper → scan → printing

taking an input
from the user
.out



Scanner scn = new Scanner(System.in);
int data1 = scn.nextInt(); ? + ...

```
Scanner scn = new Scanner(System.in); ✓  
int data1 = scn.nextInt(); }  
System.out.println(data1); } Integer
```

```
double data2 = scn.nextDouble(); } 22.22  
System.out.println(data2); } Decimal
```

```
float data3 = scn.nextFloat(); } Decimal  
System.out.println(data3); } 18.99
```

