

Samarat

(2.5 years)

PBC

→ Atlassian

→ Amazon

→ Teaching offline/online

4 years

→ 1.5 years with ApNa

Variables

→ those who vary change.

let x = 5;

$$x = 10$$

$$x = 15;$$

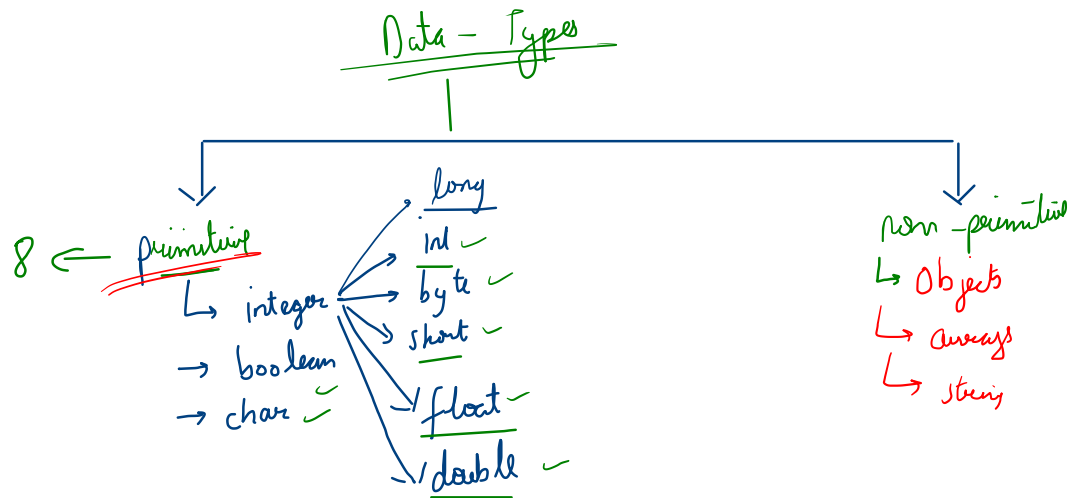
$x = 4$
let $y = x^2 + 2x;$

$$\bar{y} = 24$$

$$x = 2$$

$$\boxed{y = 8}$$

Data-types



⇒ How to define a data/variable

integer

data_type variable_name = value;

int x = 23;

10^9

int y = 100;

int z = 1000000000000;

long z = 1000000000000;

$$1 \text{ GB} \rightarrow 1024 \text{ mb}$$

$$1 \text{ mb} \rightarrow 1024 \text{ kb}$$

$$1 \text{ kb} \rightarrow 1024 \text{ byte}$$

$$1 \text{ byte} \rightarrow 8 \text{ bits}$$

32

in kb

$$1.4 \rightarrow 4 \text{ byte}$$

$$4 \rightarrow 2^2$$

$$8 \rightarrow 1000$$

$$2^3 \rightarrow 4$$

$$100$$

$$16 \rightarrow 10000$$

$$2^5 \rightarrow 5$$

324

Question 1 : In a program, input 3 numbers : A, B and C. You have to output the average of these 3 numbers.

(Hint : Average of N numbers is sum of those numbers divided by N)

```
5 Scanner scn = new Scanner(System.in); ✓
6
7 int A = scn.nextInt(); => int A = 5;
8 int B = scn.nextInt(); => int B = 10;
9 int C = scn.nextInt(); =>
10
11 int average = (A + B + C) / 3; = 7
12
13 System.out.println("Average of 3 numbers is: " + average);
14 }
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

```
samratbhardwaj@Samrats-MacBook-Pro CP % javac Main.java && java Main
```

```
5_10_6
```

```
Average of 3 numbers is: 7
```

Question 2: In a program, input the side of a square. You have to output the area of the square.

(Hint : area of a square is (side x side))

Question 3: Enter cost of 3 items from the user (using float data type) - a pencil, a pen and an eraser. You have to output the total cost of the items back to the user as their bill.
(Add on : You can also try adding 18% gst tax to the items in the bill as an advanced problem)

pencil

pen

eraser

$$\text{total_cost} = \text{pencil} + \text{pen} + \text{eraser}$$

$$\text{gst} = (\text{total_cost}) \times 0.18$$

$$\text{total_bill} = \text{total_cost} + \text{gst}$$

Question 4: What will be the type of result in the following Java code?

```
byte b = 4;  
char c = 'a';  
short s = 512;  
int i = 1000;  
float f = 3.14f;  
double d = 99.9954;
```

double result = (f * b) + (i % c) - (d * s);

$\frac{\text{int}}{\text{double}} = \underline{\underline{\text{double}}}$
 $\frac{\text{double}}{\text{float}} = \underline{\underline{\text{double}}}$

$(\text{float} * \text{byte}) + (\text{int} \% \text{char}) - (\text{double} * \text{short})$
↓ ↓ ↓
float int double
int * byte = int

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double d = 99.9954;  
  
result = (f * b) + (i % c) - (d * s);
```

(Hint : Look at the largest data type among these)

Question 5: (Advanced) Will the following statement give any error in Java?

```
int $ = 24;
```