

Java = Y

=Y Java → Foundation

=Y 1995 = Y 2023

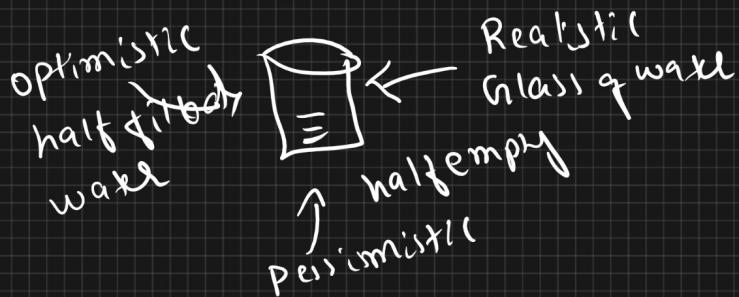
=Y Object Orientation :-

Orientation:-

↳ Prospective

↳ Way of looking

↳



⇒ Object => Laptop, mic, speaker, Room, House, pen, Book, Bus, Road, Train, Kernel

=Y Focus is the key :-

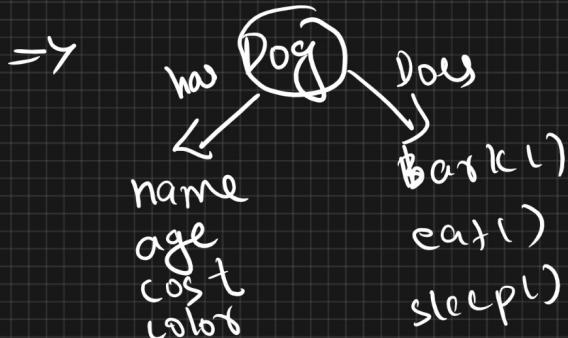
=Y

=Y Whole world as collection object

=Y Every object has something, Does something

↓
Properties

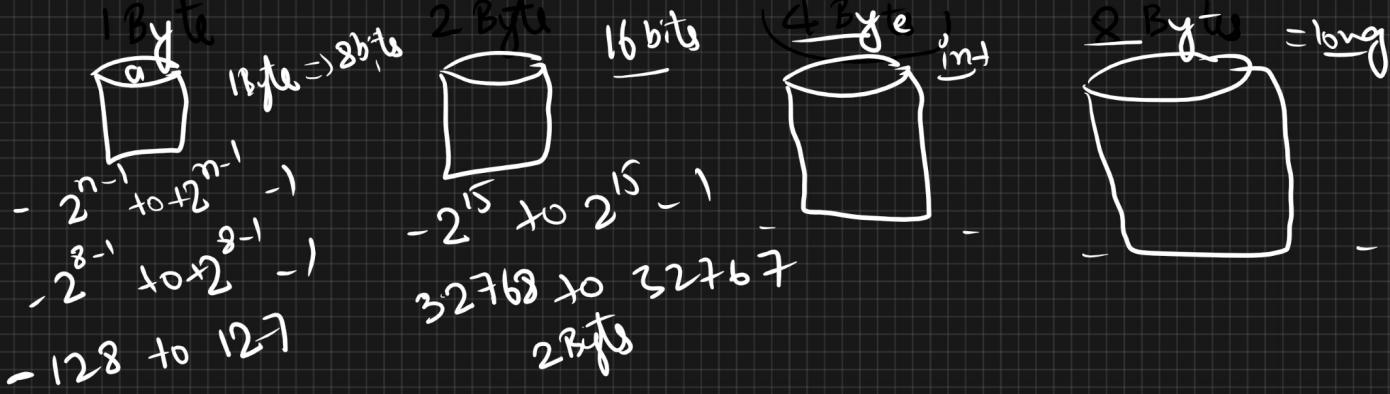
↓
Behavior



=Y Object ⇒ class :-

=Y

Bike



byte a = 45;
 (1Byte)
 int n = 45;
 - 4 byte

1.1
 1.2
 1.3
 1.4
 5
 6
 7
 8

byte a = 45;
 byte b = 45;
 (a+b),
 $45 + 45$;
 int ← 90

\Rightarrow Data type pos \Rightarrow int :-
int :-

45.5 \Rightarrow float
double \Rightarrow 4 bytes
 \Rightarrow 8 Bytes

{ range of
 float &
 double

double a = 45.5;
float b = 45.5f;
~~45.5421~~
 \Rightarrow precision
 14 digit precision

boolean a = true;
false ;

\Rightarrow char \Rightarrow 2 bytes
 byte \rightarrow 1 byte
 short \rightarrow 2 bytes
 int \rightarrow 4 bytes
 long \rightarrow 8 bytes

float \rightarrow 4 bytes
 double \rightarrow 8 bytes
boolean = true false

"Rohan" \Rightarrow String

\Rightarrow instance variable:-

int a; 0 = }
 0.0 = }
 false = }
 a [false]

double a; a [0.0]

\Rightarrow class Telusko \rightarrow Identifier

of
 int age,
 float avg,
 void conduct(bis)
of
y =
 names \rightarrow logical
 meaningful }
 Except keyword }
 Reserved words }

y
 { int
 float
 double
 class
 short }
 try final '
 catch abstract '
 throw finally '
 throws for ;
 while ;
 static ;

\Rightarrow class infix

of
 int class = 10; X

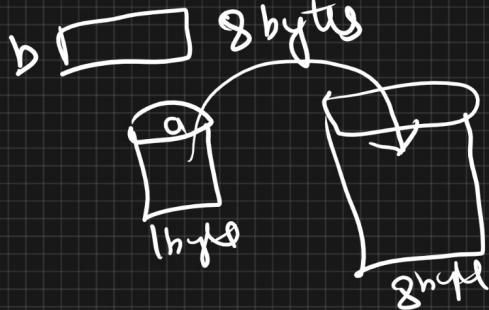
}

\Rightarrow byte \rightarrow short \rightarrow int \rightarrow long \rightarrow float \rightarrow double
 1B 2B 4B 8B 4 8
 ↓ char
 2B
 byte a = 45;
 a [45] 1Byte

double b;

b = a;

S. o. p(a);
S. o. p(b);



{ double a = 45.5; }
 byte b;
 b = a;

variable names

@#* / - \$! % &

- (underline) | \$ \rightarrow variable creation

int a = 5;
 - a = a + 1;
 a++;
 int a = 5;
 a = a - 1;
 a--;
 a [5] = 5;
 Postinrce

int a = 5;
 - a - 1;
 a [4] = 4;
 Preinrce

var++
 Post
 var--
 Pre Decr
 var--
 Post

++ var
 Post
 -- var
 Pre Decr

var++ \rightarrow increment
 -- var \rightarrow decrement

~~int a = 5;~~ a 5

~~int a = 5;~~ a 5

~~int b;~~ b 5

~~int b;~~ b 5

~~b = a++;~~ b 5

~~b = ++a;~~ b 6

s.o.p(a); 6

s.o.p(a);

s.o.p(b); 5

s.o.p(b);

~~int a = 5;~~ a 5

a 5

b 5

~~int b;~~ b 5

b = ++a + --a + a - + +a + a++;

s.o.p(a); b

n (26) ↗

a ≤ b a++ by unary operator

= ~~int a = 5~~

~~int b = a++ + a + a + a - + a - - a - + + a;~~

✓ b

✓ b

(13) ↗

Arihmetic operators

+ - * / %

$$2) \begin{array}{r} 10 \\ \times 5 \\ \hline 0 \end{array}$$

$$10 + 10 = 20$$

$$20 - 10 = 10$$

$$10 * 5 = 50$$

$$10 / 2 = 5$$

$$10 \% 2 = 0$$

$$10 \% 3$$

$$3) \begin{array}{r} 10 \\ \times 3 \\ \hline 0 \end{array}$$

Relational operators

\neq

$10 \geq \quad > \quad < \quad == \quad != \quad y =$ result in boolean
 $10 \leq$ frame

$$10 > 10 \quad \text{y false}$$

$$10 \geq 10 \quad T$$

$$10 < 10 \quad \text{y f}$$

$$10 \leq 10 \quad T$$

$$10 == 10 \quad \text{y true}$$

OR

logical operators

AND	$\{\}$	$\&$
OR	$\{\}$	$\ $
NOT	$\{\}$!

	cond1	cond2	cond3	cond4
T	T	T	T	T
T	T	F	F	T
F	F	F	T	T

F F T F F F F

$$10 > 10 \| 10 \geq 10 \| 10 == 10 \leftarrow y \text{ true}$$

$$10 \geq 10 \| 10 \geq 10 \| 10 == 10 \Rightarrow = T$$

$$10 \geq 10 \| 10 < 10 \| 10 == 10 \Rightarrow = T$$

$10 < 10 \quad || \quad 10 > 10 \quad || \quad 10 > 12$

$$\begin{array}{c} f \\ \text{OR} (=) \end{array} \quad \underline{\underline{1}} \quad \equiv \quad \text{Y. OR}$$

<u>AND</u> :-	<u>&&</u>	cond1	cond ⁿ 2	cond ⁿ 3	usual
		T	T	T	$\bigcirc T$
		T	T	F	f
		F	T	T	F
		F	F	F	F

$$10 > 10 \quad \&\& \quad 10 < 10 \quad \&\& \quad 10 == 10$$

F F $\bar{T} \Rightarrow f$

$$10 >= 10 \quad \&\& \quad 10 < 10 \quad \&\& \quad 10 == 10 \Rightarrow$$

\bar{T} F $\bar{T} \Rightarrow \text{false}$

$$10 >= 10 \quad \&\& \quad 10 <= 10 \quad \&\& \quad 10 == 10 \Rightarrow$$

\bar{T} T T $\Rightarrow + \Rightarrow$

$$\begin{array}{l} ! \text{Not} \\ ! \bar{T} = f \\ ! \bar{T} \Rightarrow f \end{array} \quad \begin{array}{l} !f \rightarrow \bar{T} \\ !f \Rightarrow \bar{T} \end{array} \quad \text{Y}$$

$\{ \Rightarrow$ Conditionals

\Rightarrow if we want to perform activity / operation
Based on condition

if - else \Rightarrow ternary operator.

if - else \Rightarrow conditionals \Rightarrow T

if () } single line I-
condn ? exp : exp
(10 > 10) ? - : (-)

int a = 10;

int b = 20;

int c
c = (a > b) ? a : b;