

① Python

① Static type language ^{specific} ~~(data-type)~~ Java

② dynamic type language → don't specify

Strong

weak language

→ Kind of
Data type-values
which
we
can
store.

① Python is a dynamic type language.

② Python is a strong language.

In Java, int a = 2;

→ no implicit conversion

In Python, a = 2
a = "niraj"

If a language is a weak language, then,
From one lower type to a higher type.

a = "niraj";

b = 2;

c = a + b; string
string.

String (2).

var a = "niraj";

var b = 2;

var c = a + b; string → weak-type language.

Python Data types -

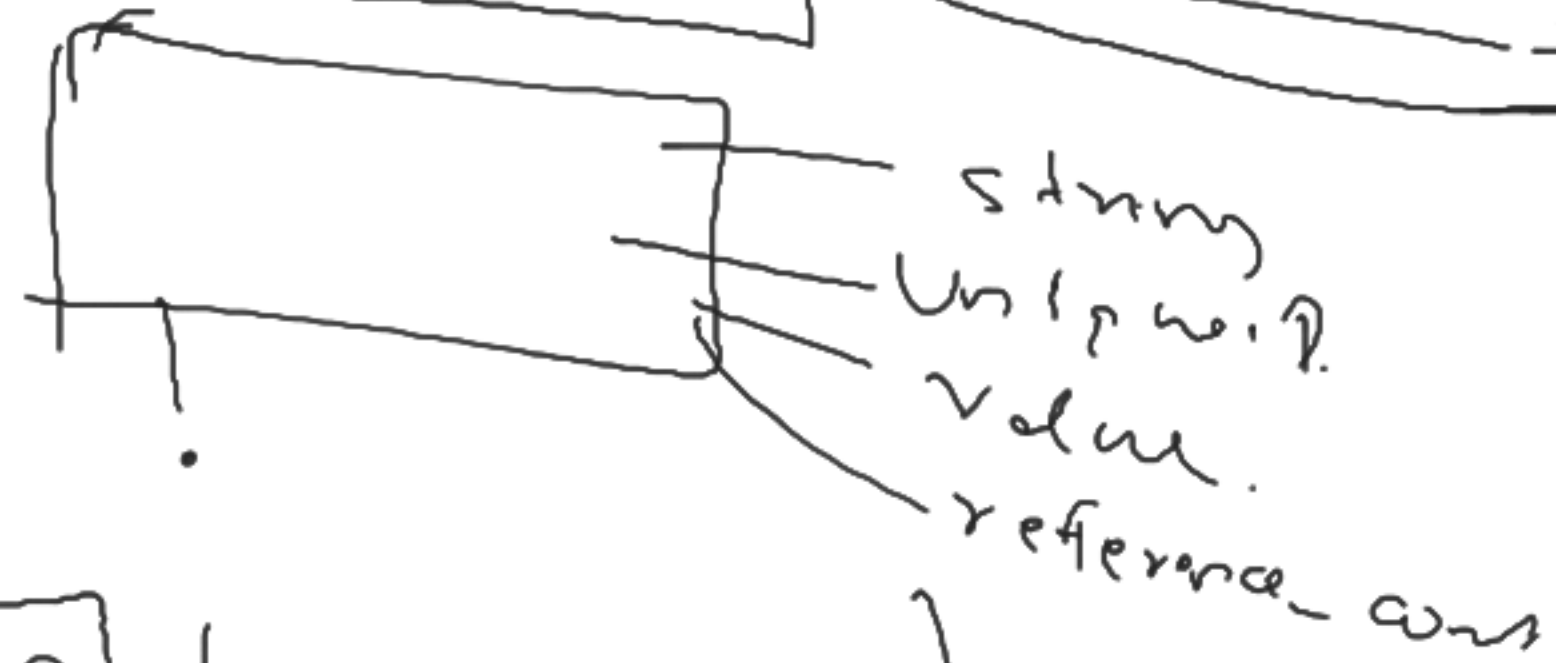
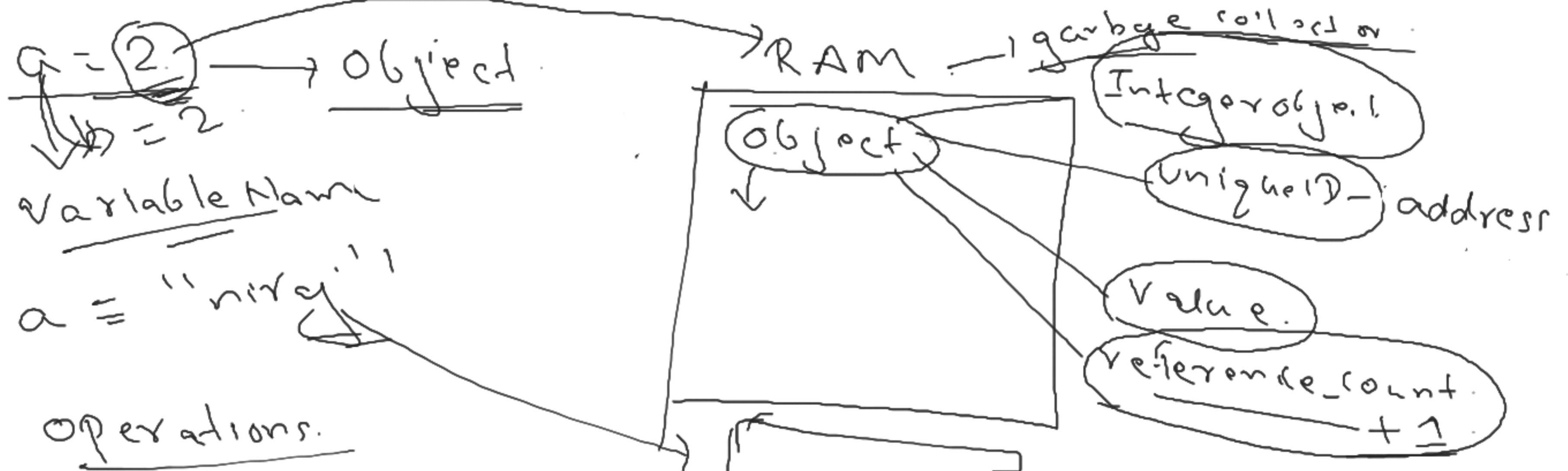
① DSA - Bit Manipulation

① Numeric →

- Integer.
- Complex Numbers - $4+2j$
- Float pointing numbers.

② boolean →

- 0 — off — False
- 1 — on — True.



① ==
 ② <=, >=, <, >
 ③ Not, in, not, in
 boolean. more simpler.

call by reference
~~call by value~~

② Sequence Type -

① List

② Tuple.

③ String

Arrays in Java →

a = [⁰"niraj", ¹"kumar", ²"bridgelabz"]

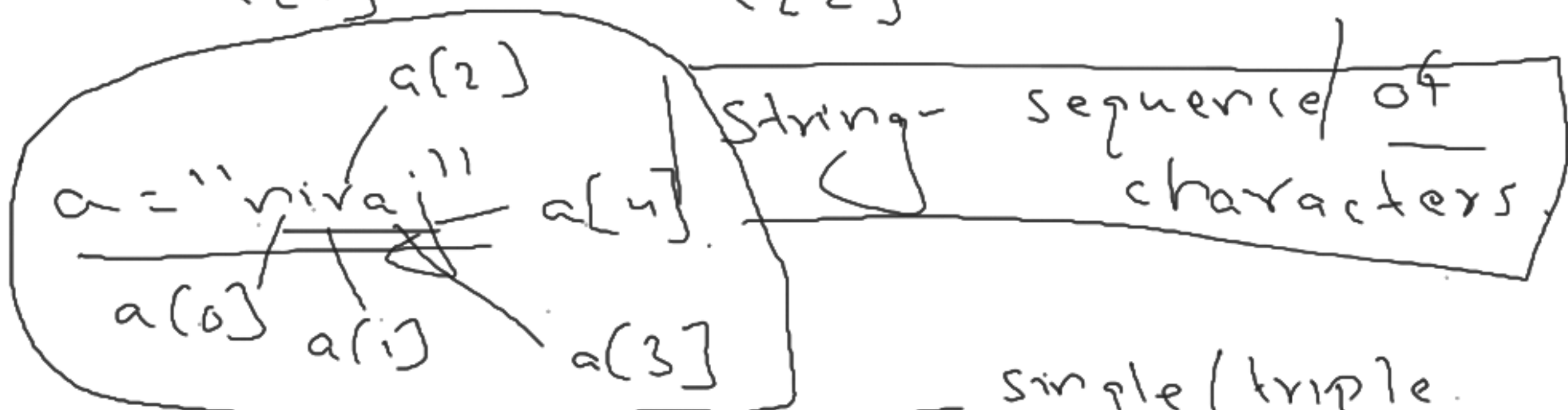
a[0]

a[1]

a[2]

collection/array.

String -



single/triple.

Everything inside double quotes is a string

Tuple - same as List

[] → list

immutable → can't modify

mutable → modify.

a = ("niraj", "Kumar")

() is immutable.

a = "niraj"

a[0] = "vinay"

overwritten.

① Sequence Operations -

① comparison

length → number of characters.
each of values.

② containment Testing → Not, in.

In list,
each of values
is tested.

③ concatenation and Repetition

④ Element Extraction and Slicing

niraj + " " + Kumar

list of string: niraj in list.
string (niraj)

① Slicing / extraction

1 2 3 4 5 (-1)

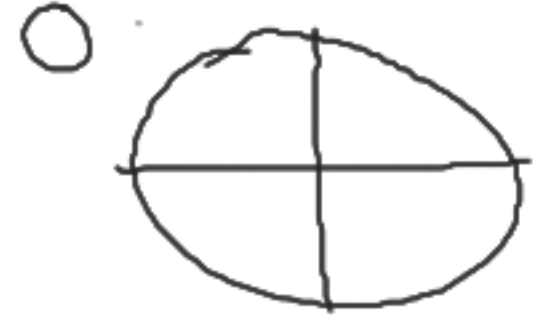
name = "niraj"
-5 -4 -3 -2 -1
0 1 2 3 4
right →

name[-1] = j
name[-2] = a

name[-5] = n

namelist = ["niraj", "Kumar", "bridge labz"]
-3 -2 -1

Slicing



1



name = "gaurav tiwari" $\xrightarrow{-1}$ front

Variable_name[start_index: stop_index: step_size] \rightarrow 2.

name[0:5] = gaurav \rightarrow not included.

13 - 1
= 12

start_index < stop_index.

len(index): +ve location

"gaurav tiwari" $\xleftarrow{-1}$ reverse
0 1 2 3 4 5 6 7 8 9 10 11
irawit

negative numbers make

earlier: +1
(6:12 + 1) \rightarrow trunk

(tiwari) \rightarrow reverse
irawit

(6:12 + 1) \rightarrow reverse.

