Python Programming @ Sunbeam Infotech

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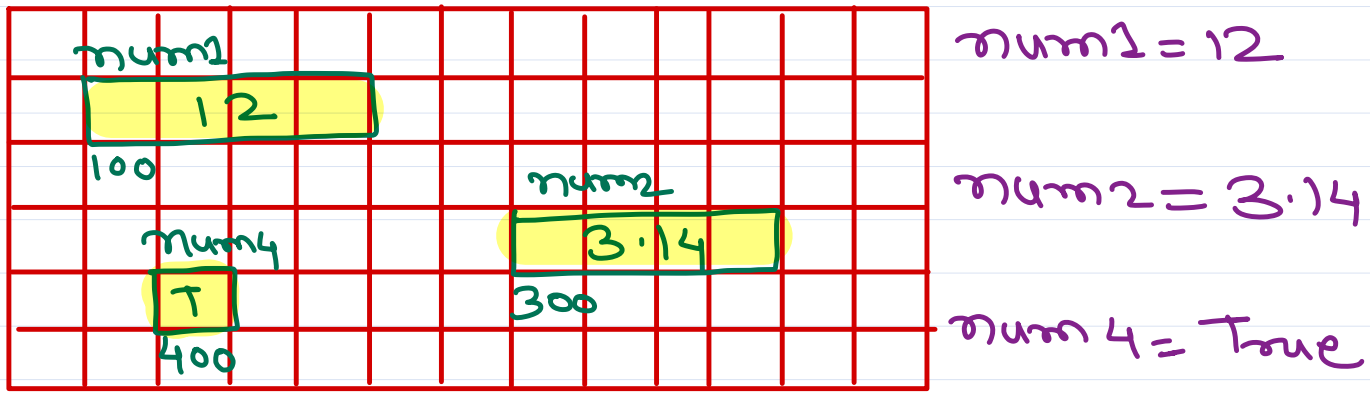
Variables

RAM (in general prog lang like C/C++/Java).



num1 = 12

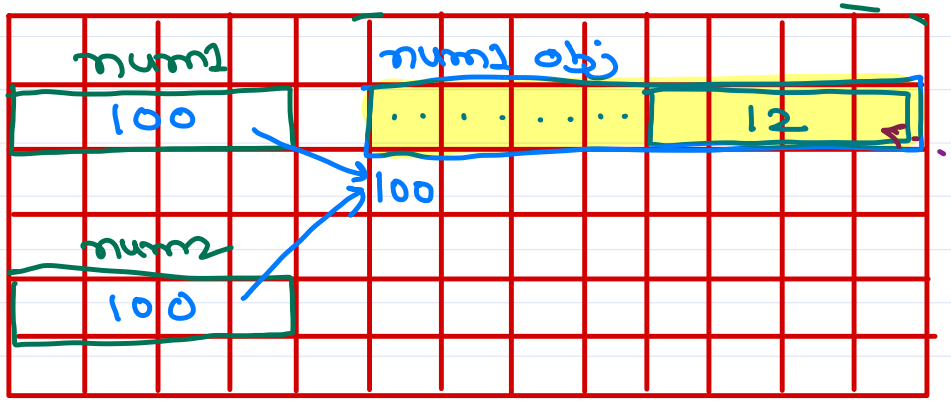
num2 = 3.14

num4 = True

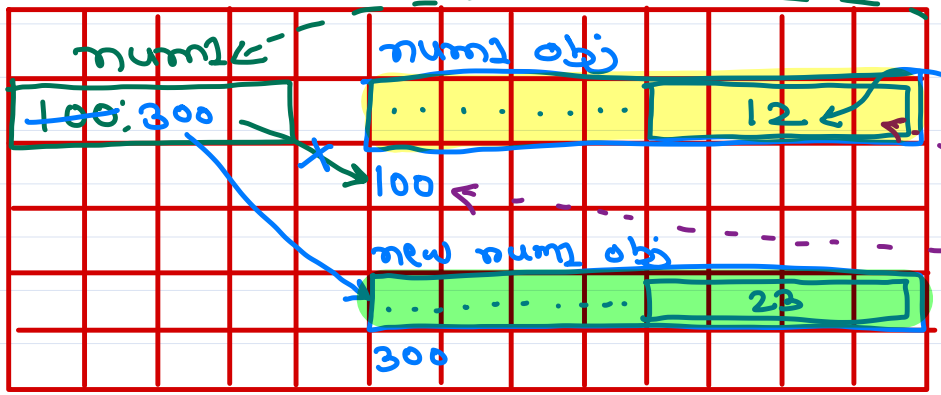
num1 = 100

num2 = 100 (two var with same value).

RAM (in Python)



RAM (in Python)



num1 = 12

print(num1)

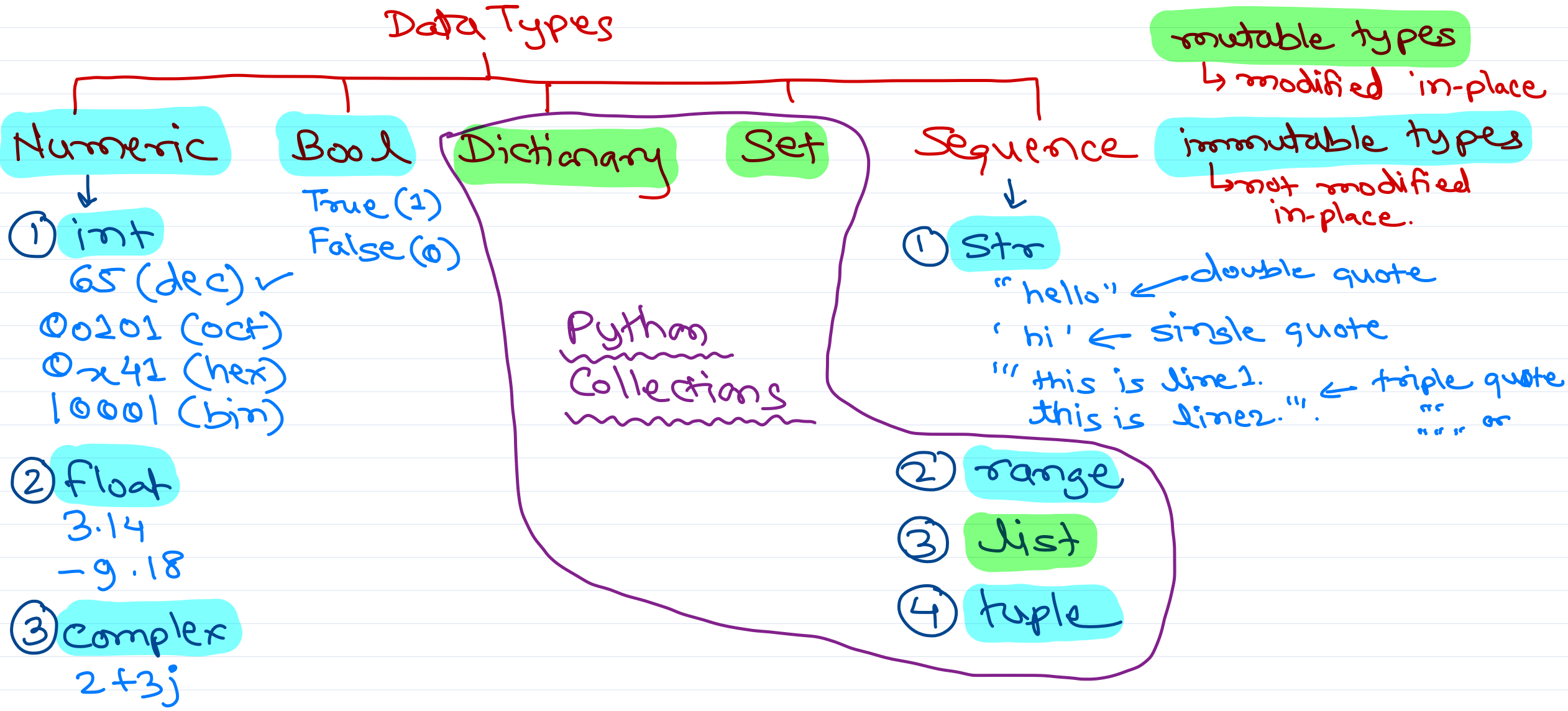
print(id(num1)) → 100

print(num1.__sizeof__())

num1 = 23

print(id(num1)) → 300

Data types


Data Types
Numeric
Bool
Dictionary
Set
Sequence
mutable types
↳ modified 'in-place
immutable types
↳ not modified in-place.
1 int
65 (dec)
0o201 (oct)
0x41 (hex)
10001 (bin)
True (1)
False (0)
2 float
3.14
-9.18
3 complex
2+3j
Python Collections
1 Str
"hello" ← double quote
'hi' ← single quote
""" this is line1.
this is line2.""" ← triple quote
''' or
2 range
3 list
4 tuple

Python operators

① Arithmetic operators

+ - * / // % **

True division: / → 22 / 5 = 4.4

Floor division: // → 22 // 5 = 4 (int)

Modulus: % → 22 % 5 = 2

Power: ** → 2 ** 5 = 32

② Assignment & in-place ops

= += -= /= //= &= |= ...

num = 10

num /= 2 → num = num / 2

③ Comparison operators

< > <= >= == !=

Evaluates to True/False

22 > 7 → True & 22 < 7 → False

④ Logical operators

and or not

cond1 and cond2 = result (True if both cond are true)

cond1 or cond2 = result (True if any cond is true)

not cond = result (True if cond is False & False if cond is True)

⑤ Bitwise operators

& | ~ ^ << >> (bit level)

9 & 5 = 1001 & 0101 = 0001 = 1

⑥ Special operators

is, is not, in, not in

identity, membership

Python control statements

1. decision control stmt
   - if-else
2. selection control stmt
   - match-case
3. iteration control stmt
   - while loop
   - for loop
4. jump stmts
   - break
   - continue
   - return

Thank you!

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