```
class Date:
    def __init__(self):
        self.day = 25
        self.month = 9
        self.year = 2025

D = Date()
```

— ①

— ②

Statement ① : Python understands that the programmer wants to define a new class named Date and he has defined constructor function in the class.

Statement ② : Python understands this to be an assignment statement. It proceeds towards the execution of R.H.S.

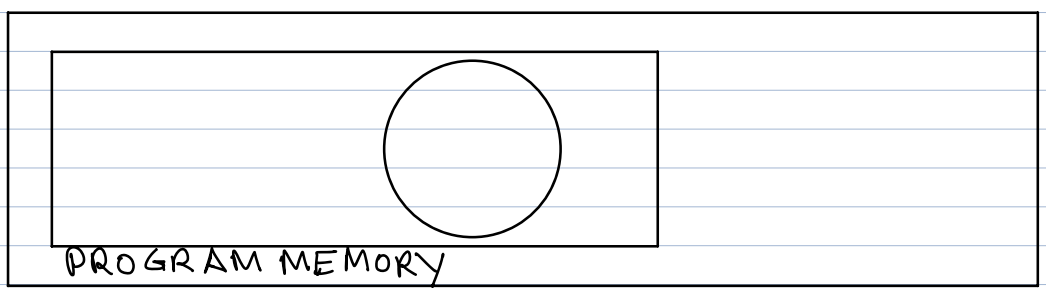
Date ( )

↳ class name

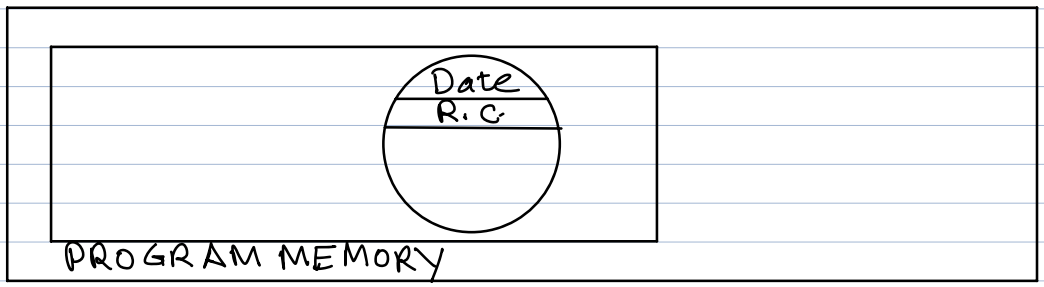
→ call operator.

Class name followed by the call operator == Programmer requesting an object of that class.

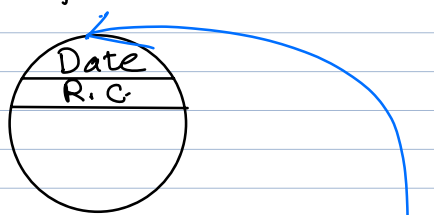
Step - (I) Allocate memory block in program memory.



Draw three compartments in the block



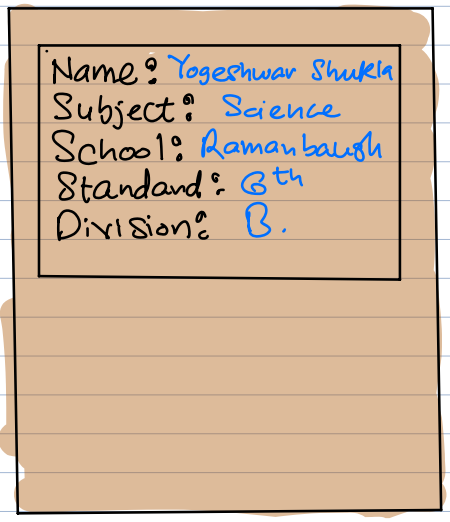
Call constructor function (if present), and pass this newly created object as an actual parameter.



Date.__init__(self)

Revision Session 026 over

Next Step: How the constructor function fills value part of the newly allocated object which is passed as an actual parameter to its formal parameter named self ??



Property name : property value

attribute name : attribute value

Property = ગુણધર્મ

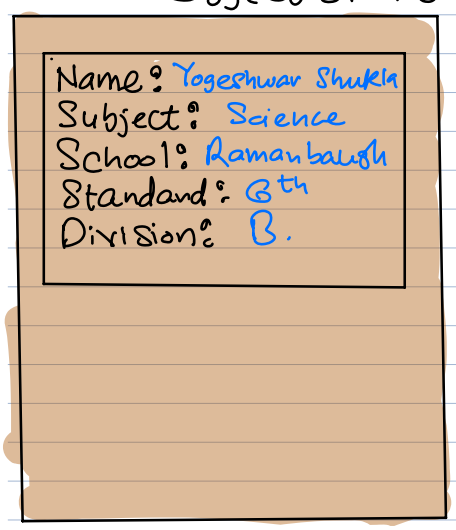
attribute = ગુણ

Liquid: No color, No odour, No taste

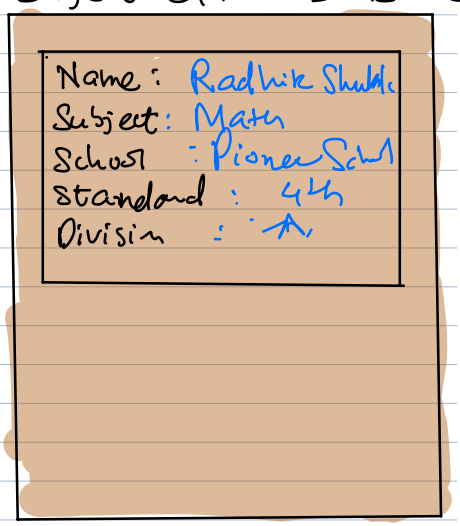
boiling 100° C. H_2O

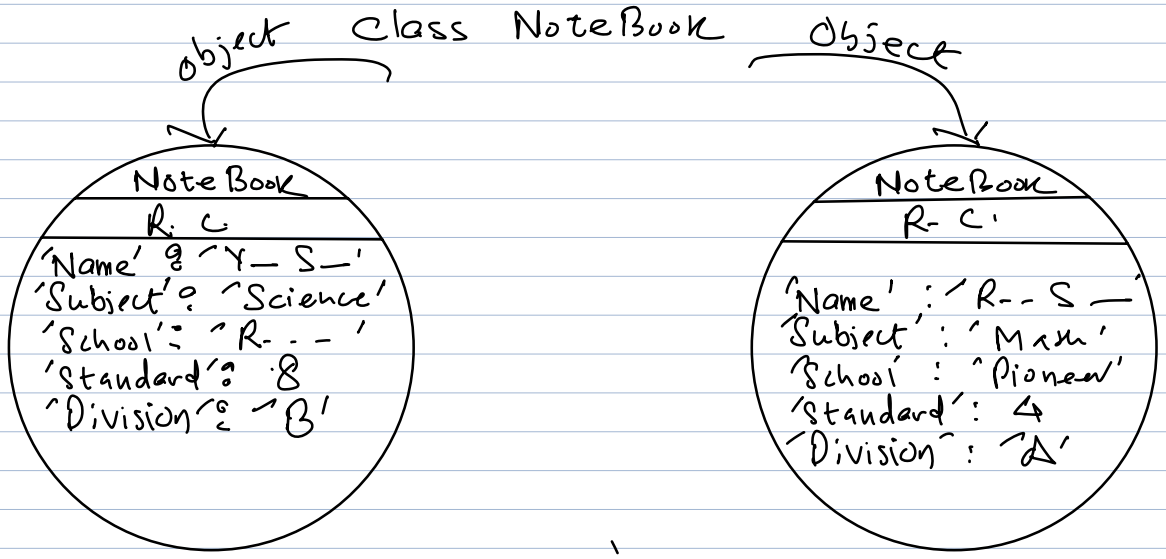
NoteBook (class)

Object of NoteBook



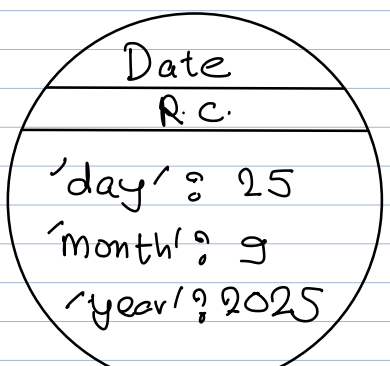
Object of NoteBook

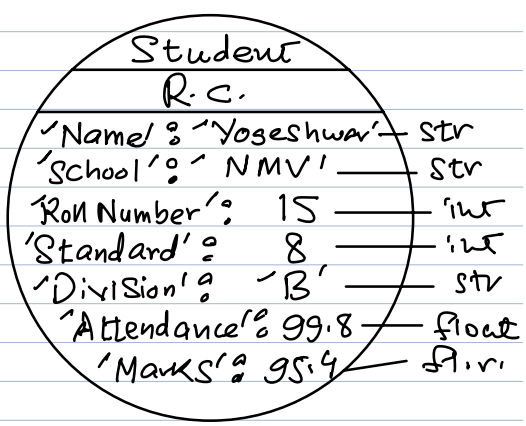




PRINCIPLE: In Python, data stored in the value component of ANY object takes the form of

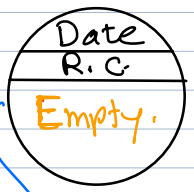
'attribute name': attribute value pairs of which 'attribute name' is ALWAYS a string object attribute value is object of DESIRED class.





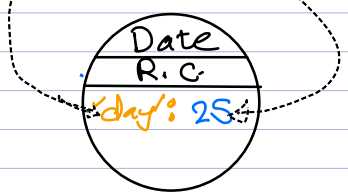
Filling value component of object in attribute name : attribute value format:

[Source Code → memory management mappings]

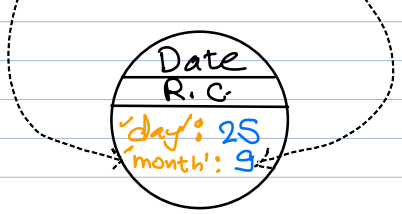


Date.__init__(self)

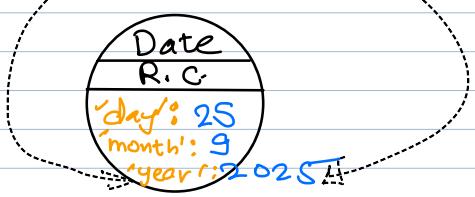
self.day = 25



self.month = 9

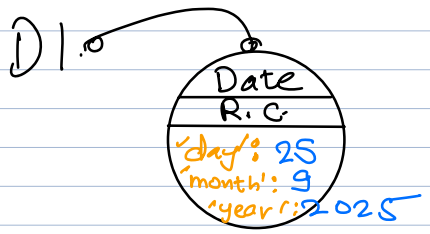


self.year = 2025

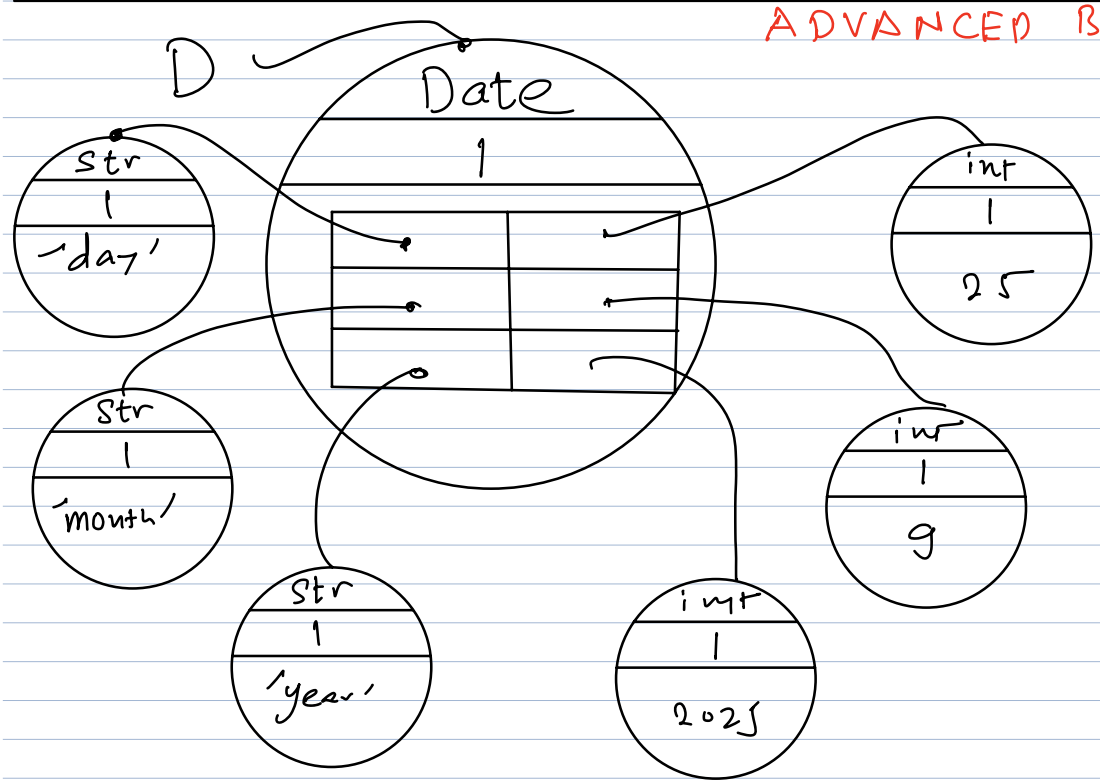


Control flow returns from Date.__init__() to Python. Then Python treats execution of RHS Date() to be over.

Then it attaches the object with LHS name



ADVANCED BEGIN.



D = Date()

type(Date) == class type

∴ Date() == type.__call__(Date)

↳ type.__new__(Date)

↳ PyMem_Alloc()

↳ malloc()

malloc()

mmap()

on Linux and MacOS X

VirtualAlloc()

on Win()

POBR | PGD | PUD | PMD | P.T. | → PAGE FRAME

pdg_t pud_t pmd_t pte_t

Struct page {

ZONE_DMA | ZONE_NORMAL | ZONE_HIMEM

ADVANCED END.
