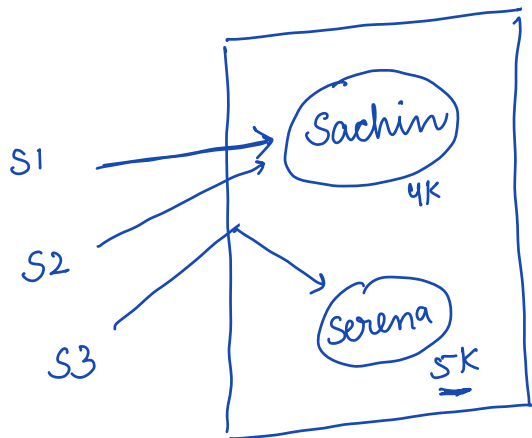


- Summary
- Today's content
- Strings

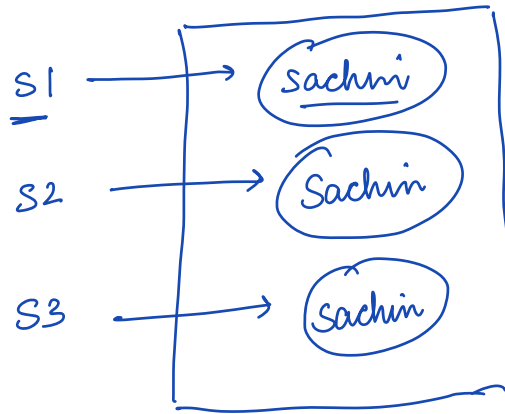
↓
unchangeable

if changed it would be new location.

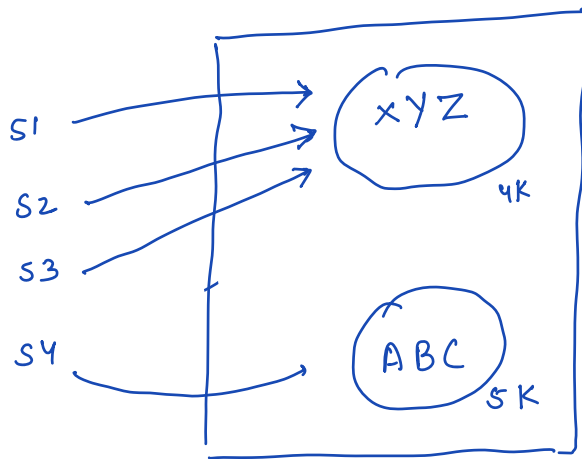


S3 = Serena

Case :

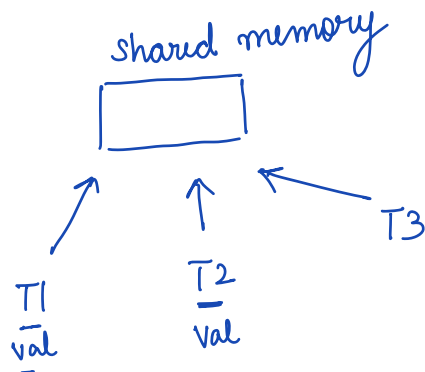


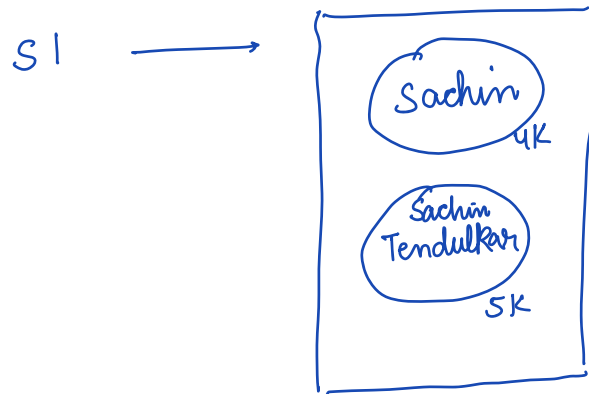
1. Save memory -



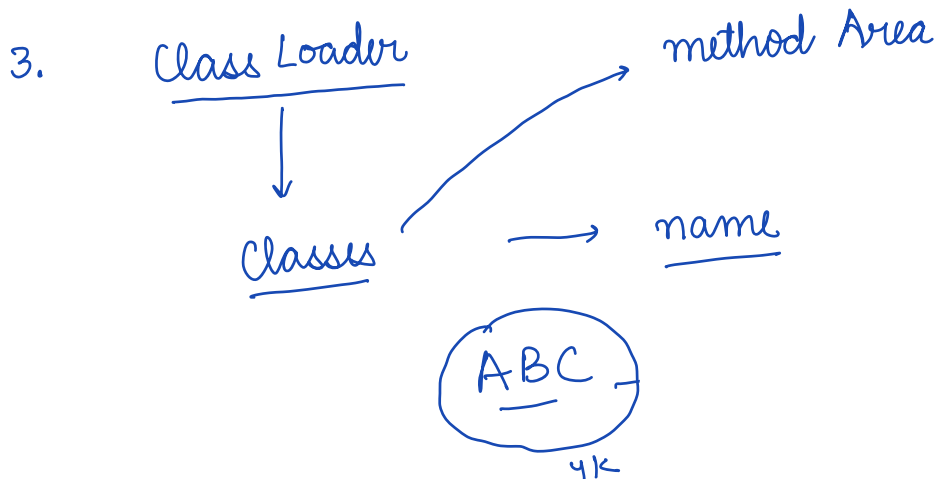
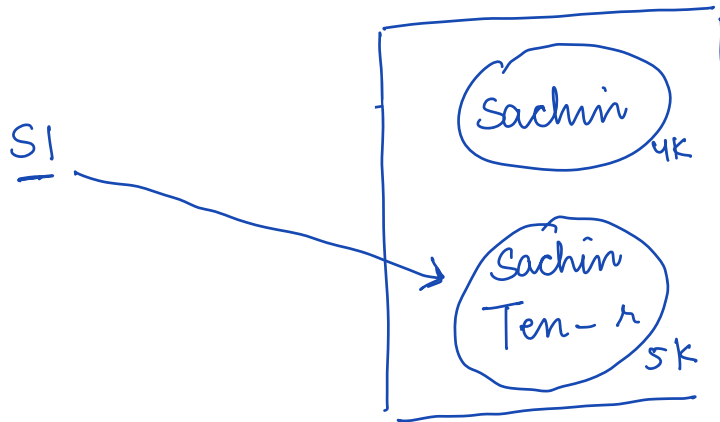
S4 → name = ABC

2. Thread safe





SI.concat ()



- Wrapper Classes
↳ immutable in nature

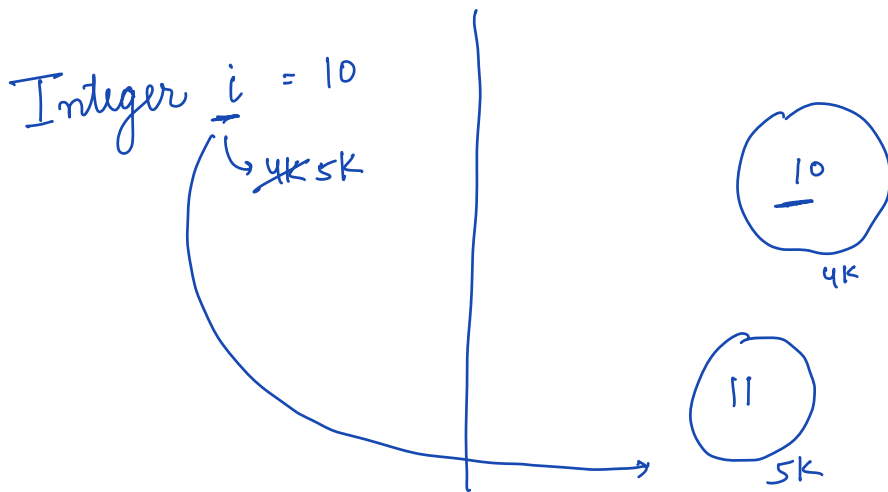
- Pass by Value

• class Integer {
 int i

class Character {
 char c

}

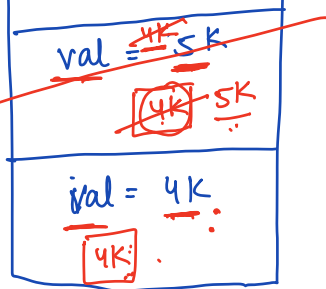
}



Pass by Value

modify

main

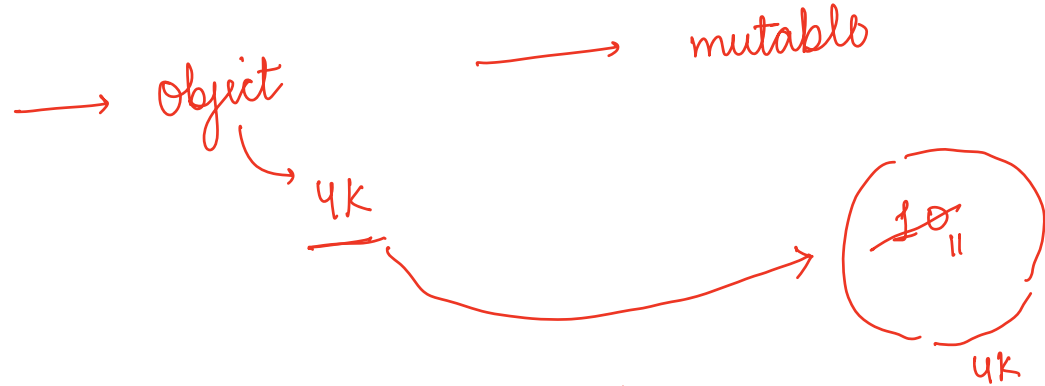


Heap

110
10

Pass by Value

— copies are created



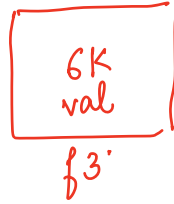
→ Wrapper Classes → Java

→ To Do: Find a method → custom classes

• save memory

val

f1.val = 4K
f2.val = 5K
f3.val = 6K



i → 4K

i → 5K

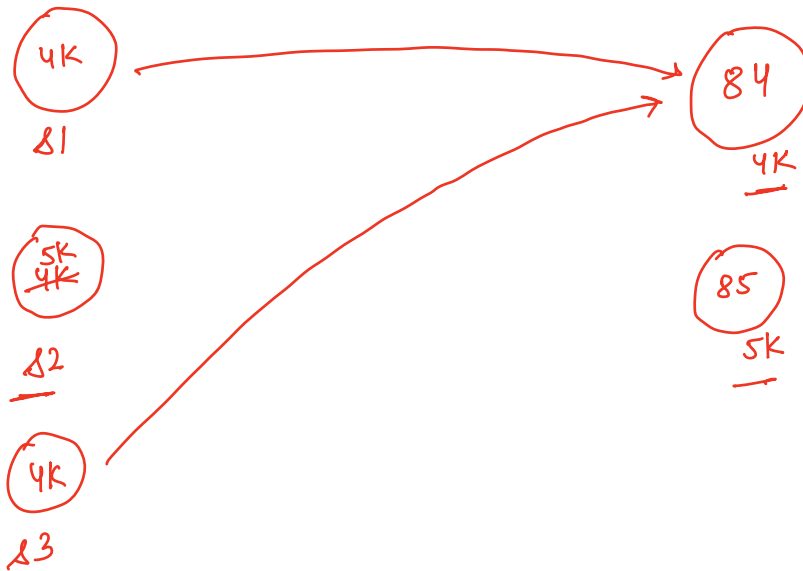
i → 6K



i = i + 1



i = i + 1



a Math question

$$-40 \% 9$$

$$\text{maths} = R =$$

$$\text{Divi-} \text{dent} - \text{closest} \leq \text{Divident}$$

$$124 \% 15$$

→

$$\frac{124}{15} = \frac{15 \times 8}{120}$$

$$= 4$$

$$-40 \% 9$$

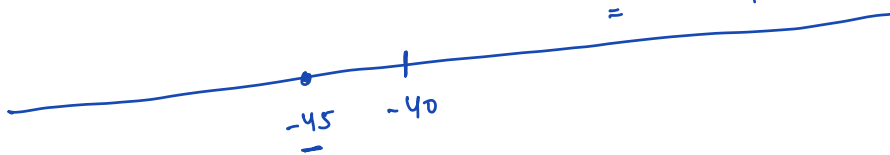
=

$$-40$$

$$- \left(\begin{array}{l} \text{closest mul of} \\ 9 \leq -40 \end{array} \right)$$

$$= -40 - (-45)$$

$$= -40 + 45 = 5$$



$$-40 \% 9$$

=

$$\text{Dividend} - (\text{Divisor} \times Q)$$

$$= -40 - \left(9 \times \left(\frac{-40}{9} \right) \right)$$

$$-4$$

$$9 \overline{) -40} \begin{array}{l} -4.3 \dots \\ \hline \end{array}$$

$$= -40 - (9 \times -4)$$

$$= -40 + 36 = \underline{\underline{-4}}$$

inbuilt

$$\Rightarrow (x \% m) + m$$

static \Rightarrow class property



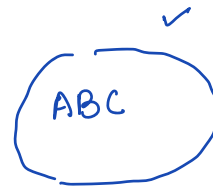
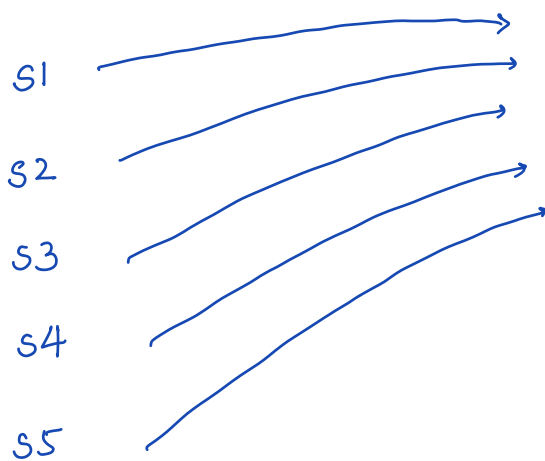
variables

methods

blocks

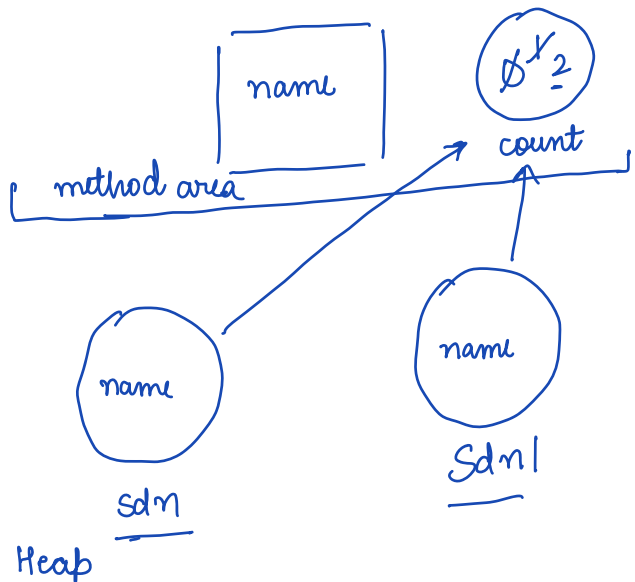
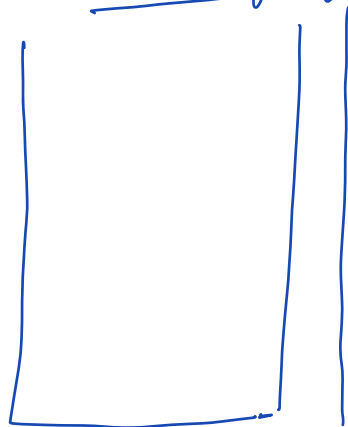
nested classes

common to all objects



same value
visible to all

count of objects



Static functions

→ common to the entire class

Math class

Math.pow(2, 4) → 2⁴ function

Math.abs(-20) → (-20)

utility functions

print value of count of objects

static non static

this - object reference

1) count of objects → no this

2) print Name → this ✓

main

• JVM — main — static — object independent
 ↓
 class name.

Static function → classname this
→ ✓
└ non-static .
└ static variables ✓

Non static function
└ Non static - ✓
└ Static variables

break - 10:34 pm
|
10:44 pm

✓ Give a video - HW

Q → ✓

Wrapper

5
3K

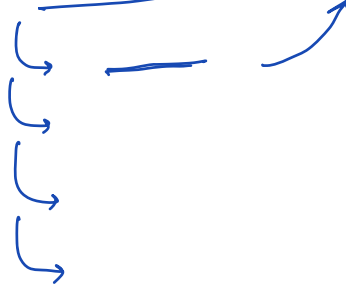
5
4K

6
6K

✓ A
static block

✓ B
main

✓ C
Constructor



```
static {  
    _____  
    _____  
    _____  
}
```

To Do :

init block

INIT

• static nested classes

```
class Student {  
    static class Ops {  
        _____ ] variables  
        _____ ] methods  
    }  
}
```

writing methods on static variables

static class
non static
data

Student.Ops. _____

}

```

class Student {
    String Name
    int rollno
    [ static count ✓
      static String school ✓ ]
    {1 | Name, rollno
      static class sfns {
          f2
          f3
      }
    }
}

```

```

class Straight line {

```

nested

```

    static class Pair {
        static functions {1
                          f2
        }
    }
}

```

Inheritance — code re-use

Vehicle

Car

Vehicle .

colour
maxspeed
numTyres

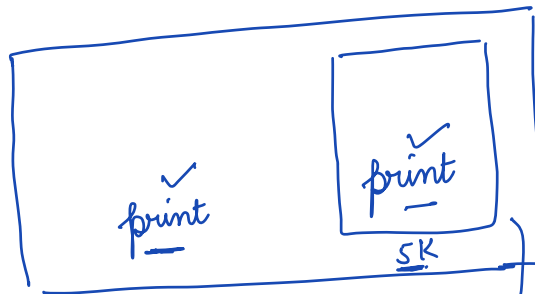


Car

numGears
isConvertible

Car c = new Car()

constructor
super()



c = 4K

parent class object

super()

5K - object of parent

super.

super = 5K

4K. getmaxspeed

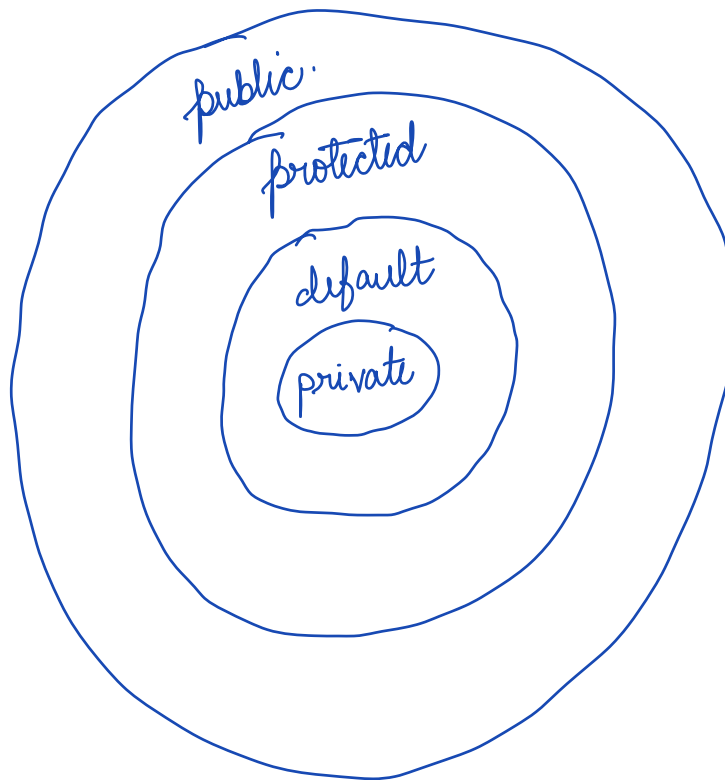
4K. color

4K. print

private - same class
default - same package
public - global access

protected - same package
and

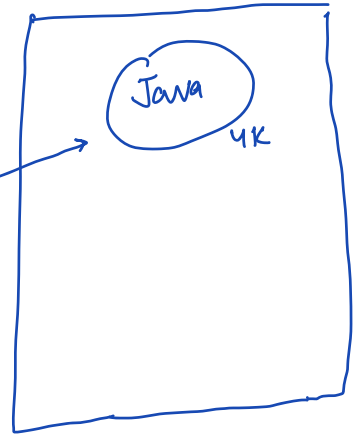
Truck P1
T e V
Vehicle P2 protected



Doubts

String s1 = "Java" → 4K

String s2 = "Java"



s1 = "Javac"

checking → overhead

literal

new

Pool