

→ Context after today's Session ↗ After today's Context

```
// class Main() {
```

```
    - fun1()
```

```
    - fun2()
```

```
    - fun3()
```

```
    - fun4()
```

```
    - fun5()
```

```
    psvm() {
```

```
}
```

```
}
```

→ very long

→ Readability

→ Debugging
code become
very very
difficult

→ update

→ Testing

→ modular / functional

// Object orient Programming / Java

Class

Object

blue print

Real creation of Blue Print

Real Instance of Class

Class Car → Blueprint

attribute of a class
data

- colour
- seating capacity
- airbags
- mpg
- horse power

function of a class

- drive()
- break()
- music()
- gears()
- A/C()

Object: Vartha's Car

colour = "Red"
seating capacity = "4"
airbags = "4"
mpg = "25"
horse power = "1200"
drive()
break()
music()
gears()
A/C()

Object: Shlok Car

colour = Black
seating capacity = 7
airbags = 1
mpg = 20
horse power = 1200
drive()
break()
music()
gears()
A/C()

Syntax: {small letter}

```
class rect
{
    int l;
    int b;
    int area() {
        return l * b;
    }
    int perimeter() {
        return 2 * (l + b);
    }
}
```

// Blue print of rectangle

Syntax: To create object

classname objname = new classname();

rect obj1 = new rect();

↳ how we can create an object

obj1.l = 4; obj1.b = 6;

int n = obj1.area();

print(n)

↳ obj1.area()

{ l: 4, b: 6 } → { return l * b, 2 * (l + b) }

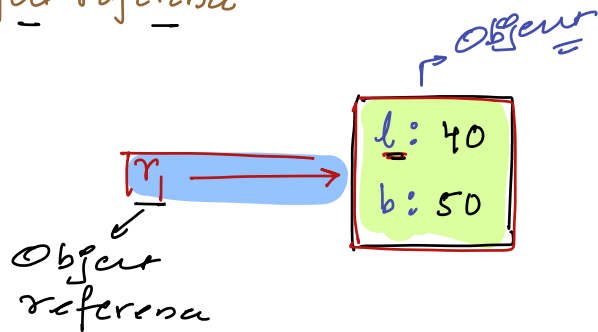
// Diff Obj & Obj reference ?

```
class rect
{
    int l;
    int b;
    int area() {
        return l * b;
    }
    int perimeter() {
        return 2 * (l + b);
    }
}
```

rect r1; } object not created

r1 = new rect();
 ↓ creation of object

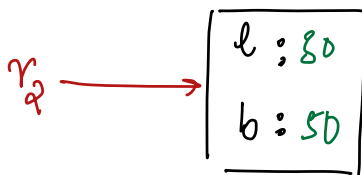
Object reference



$r1.l = 40$

$r1.b = 50$

rect r2 = new rect();



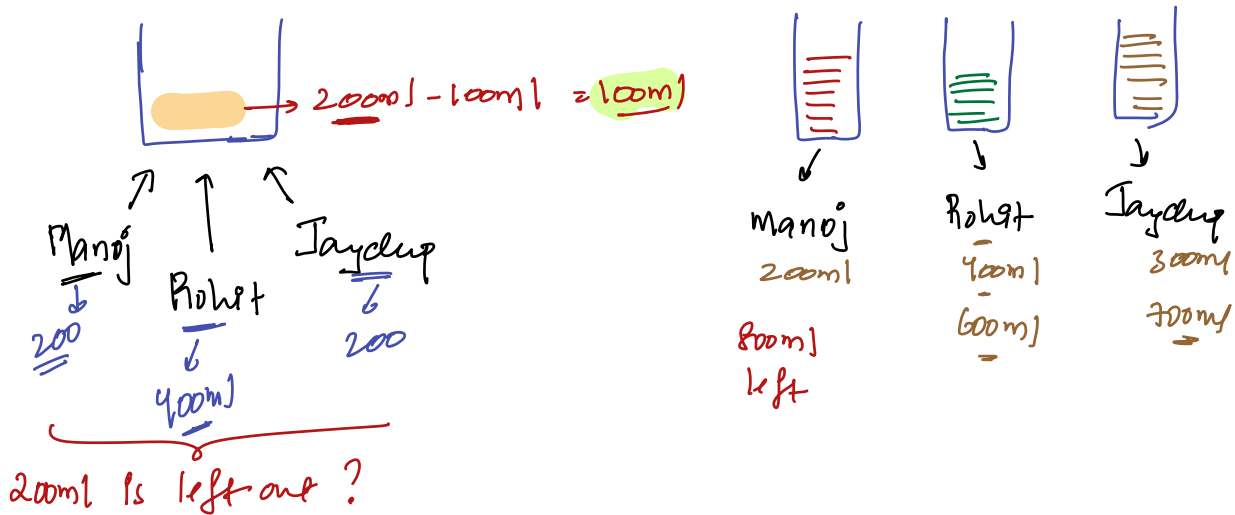
$r2.l = 30$

$r2.b = 50$

// What's the use of object reference?

// \$ tiny:

pre-convd \longrightarrow convd



All 3 are using same bottle

// All 3 are having their own bottles

1) Change done by a person
It's also effecting other person

1) Change in 1 bottle won't effect other bottles

2) Object references: Multiple object reference can point to same object

Rect $a_1 = \text{new Rect}()$

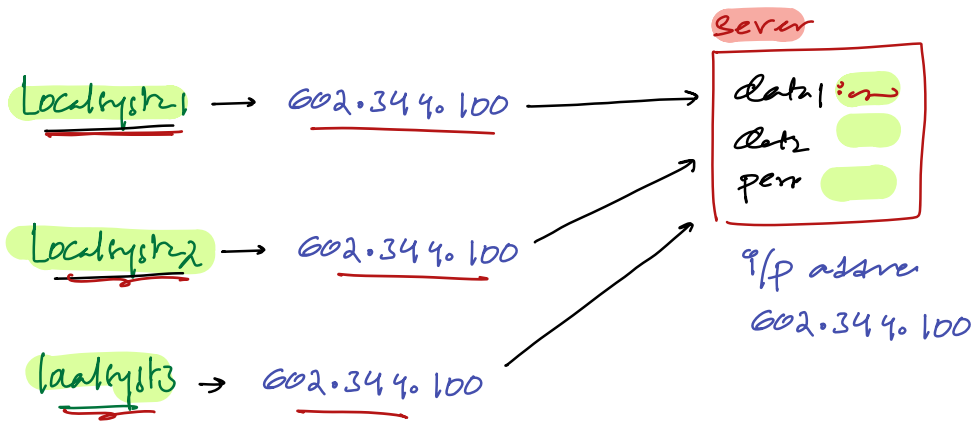
$a_1.l = 30$, $a_1.b = 40$

$a_1 \rightarrow$ $\begin{cases} l = 30 \\ b = 40 \end{cases}$

Rect $a_2 = a_1$ } a_2 will now point to same object a_1 is point

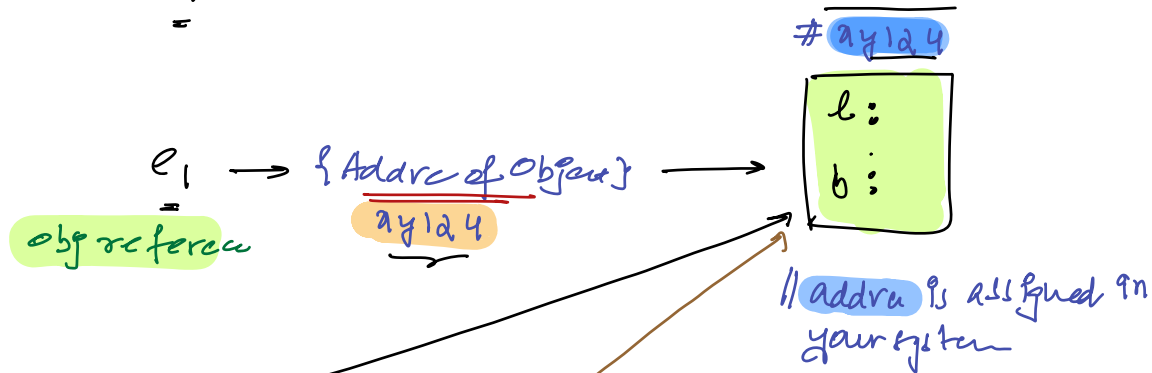
$a_2.l = 50$

$\text{print}(a_1.l) \Rightarrow \{ \Rightarrow 50 \}$



// local system → { IP address } → { We are going there }
getting data

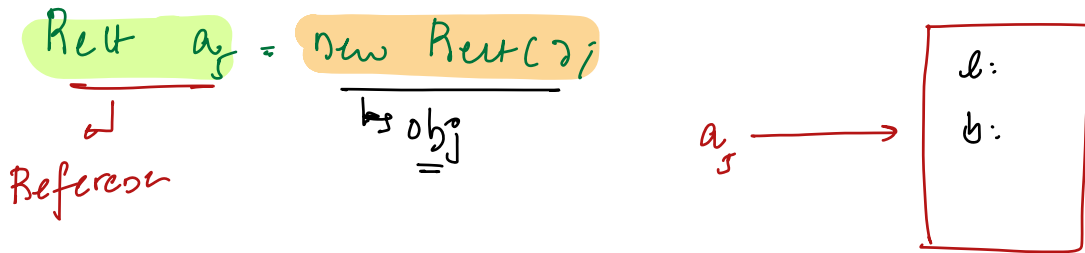
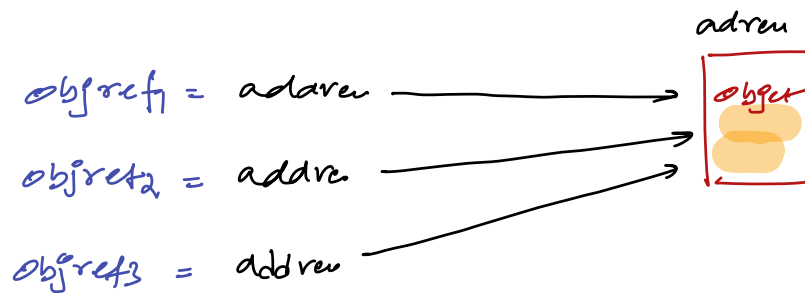
// Ref $c_1 = \text{new Ref}()$



Ref $c_2 = c_1$
#xy124 ← #xy124

Ref $c_4 = c_2$
#xy124 = #xy124

// In our obj reference we just store
address of an object &
using that we are able
to access the data of that object
present at that address



$Ref\ a_{6j} \Rightarrow \{ \text{object not created} \}$
 ↳ object reference is created