

Top level  
are instance of Object  
true

Global level

var o = { }  
 o instance of Object  
 true

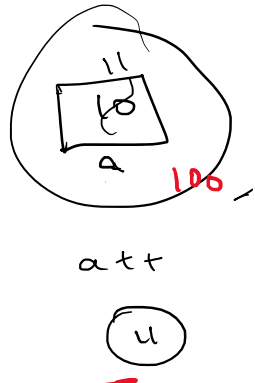
Object { }

are instance of Array  
true

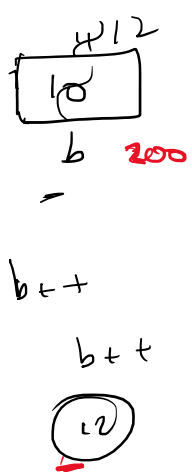
var arr = [ ]  
 Array { }

## IMMUTABLE TYPES

var a = 10  
 var b = a;



value copy



distinct memory address creation

primitives / Immutable types → copy → 2 different values

changes done in Either original or copied value, does not affect the other.

Mutable types

array literal

Object literal

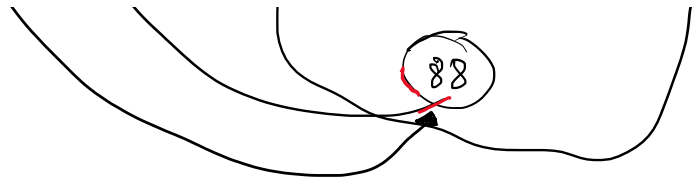
var arr1 = [ ]

var arr2 = arr1

arrs get arr



values get ~~and~~ mutated



→ changes done in either original value or copied value will ultimately change the other also.

Mutability

primitive value

var obj 1 = { ..., ..., }

V8 engine

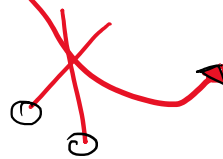
garbage collection

or C

heap memory

type same  
value empty

var obj 1 = { ..., ..., }



obj 1 → empty object

null

is like a scissor

Primitive values

refer  
address

a.toUpperCase()

(.) operator

'priya'  
'PRIYA'

var a = "priya";

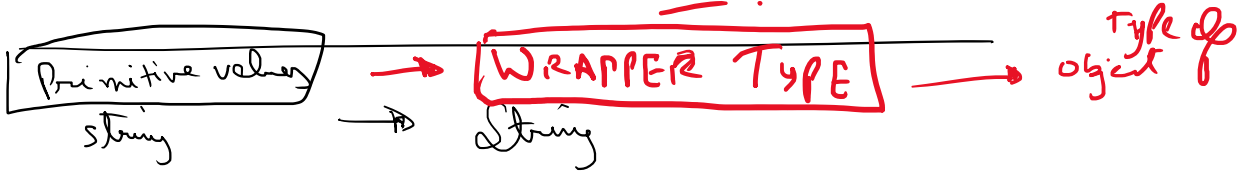
var surname = new String("...")

object type  
var a = new String('...')

Power

a.toUpperCase()

`a. toUpperCase();` <sup>value type</sup>  
`'PRIYA';`  
<sup>normal human.</sup>  
`a;`  
`println;` <sup>value type</sup>  
**AUTOBOXING**  
<sup>Power</sup>  
`a.`



number → Number

boolean → Boolean

`var bool = new Boolean ( )`

bigInt → BigInt

symbol → Symbol ( )

<sup>null → empty value</sup>  
<sup>undefined → empty value</sup>