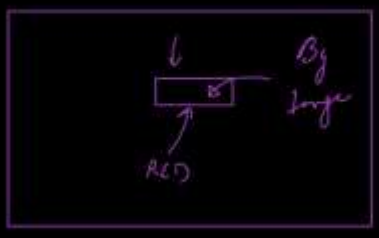
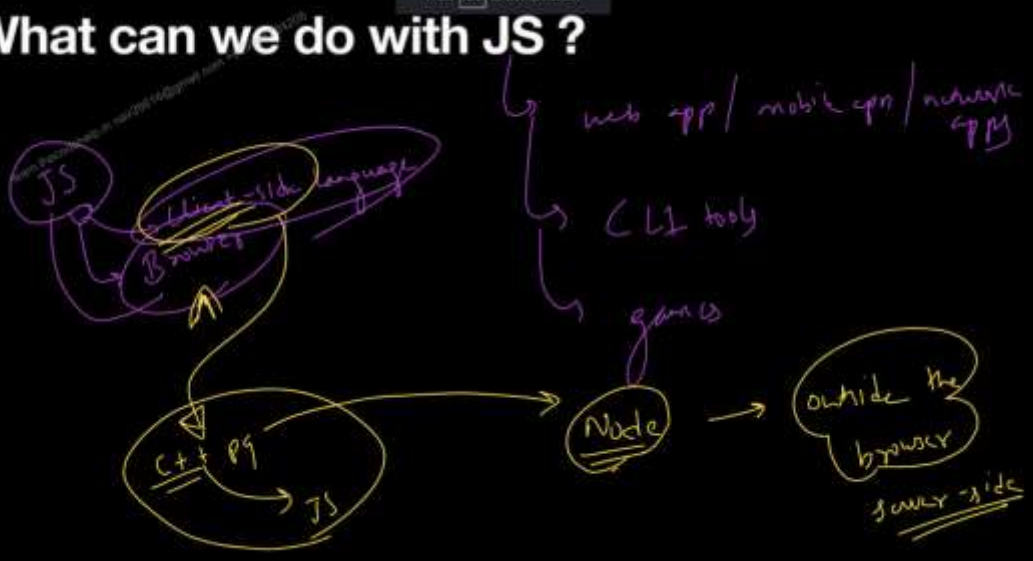
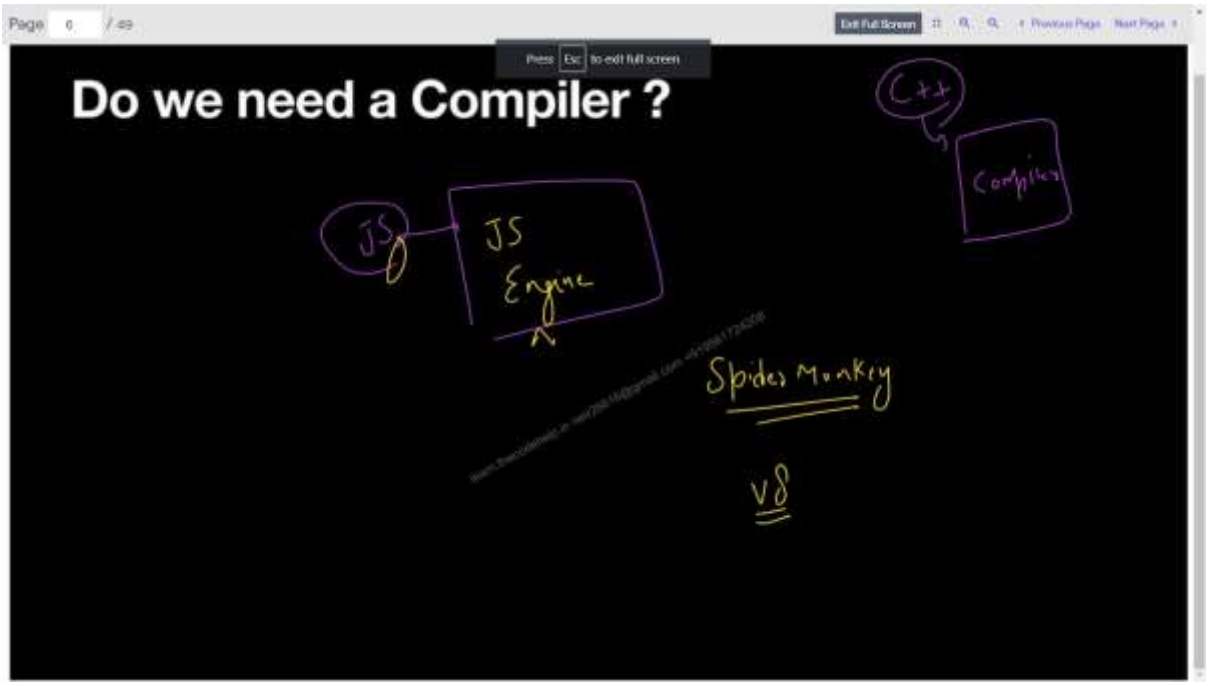
JavaScript Basics

Instructor: Love Babbar



What can we do with JS ?

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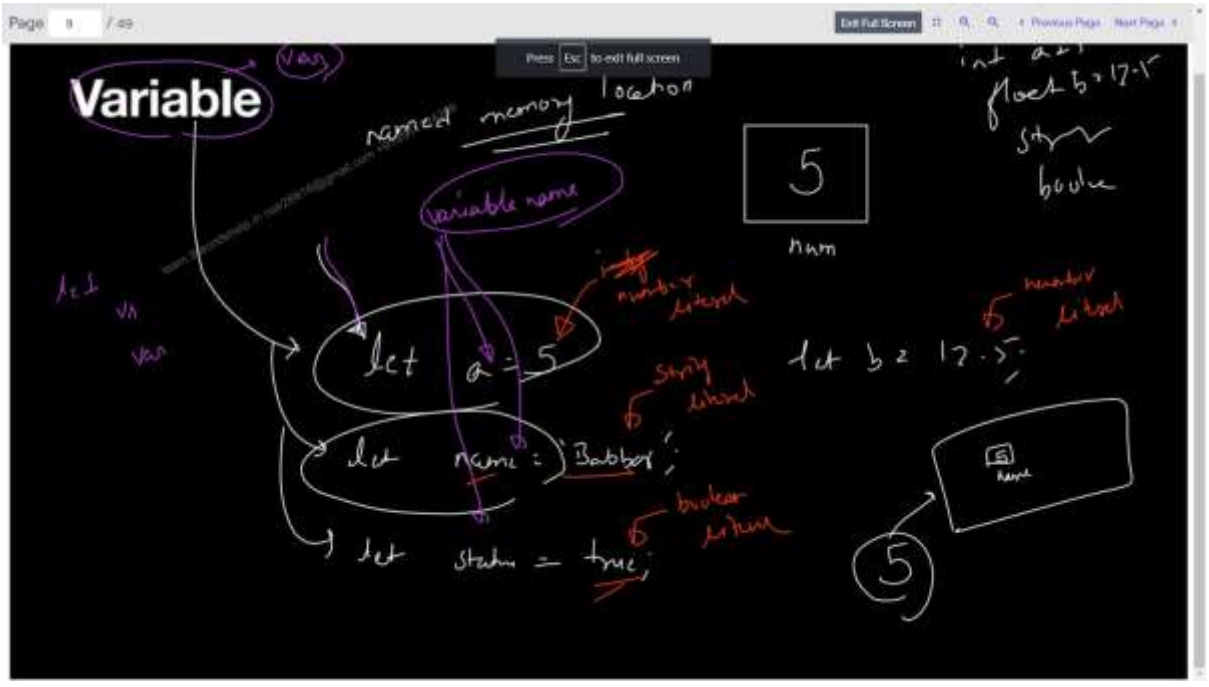
Do we need a Compiler ?
C++
Compiler
JS
JS Engine
Spider Monkey
V8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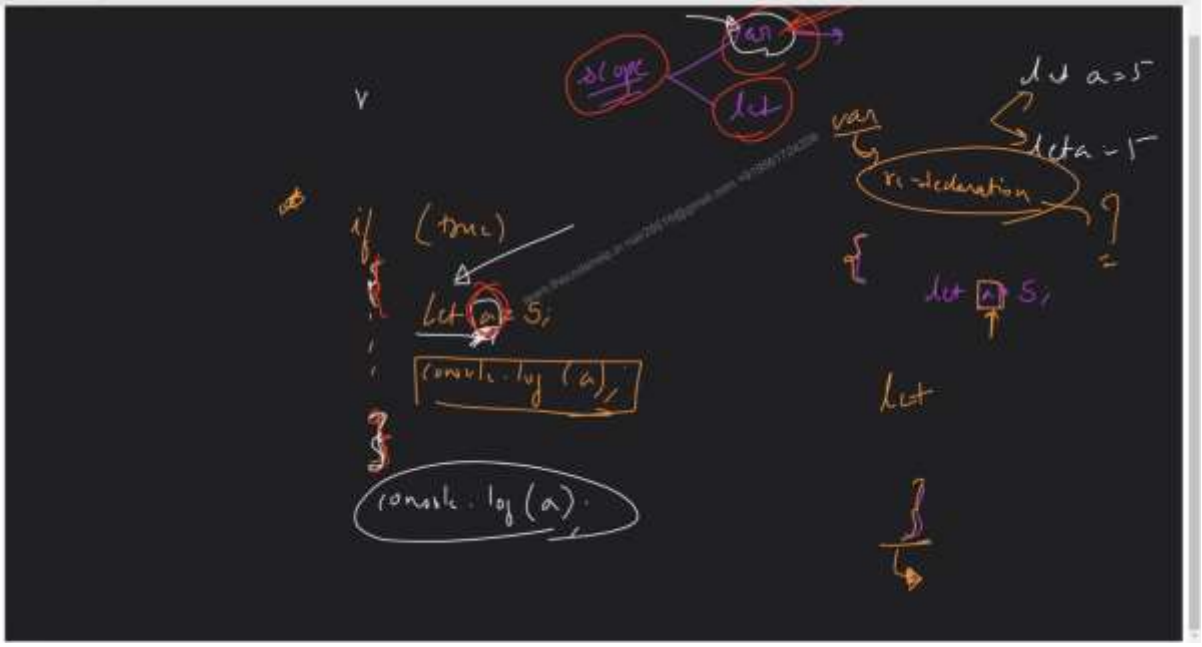
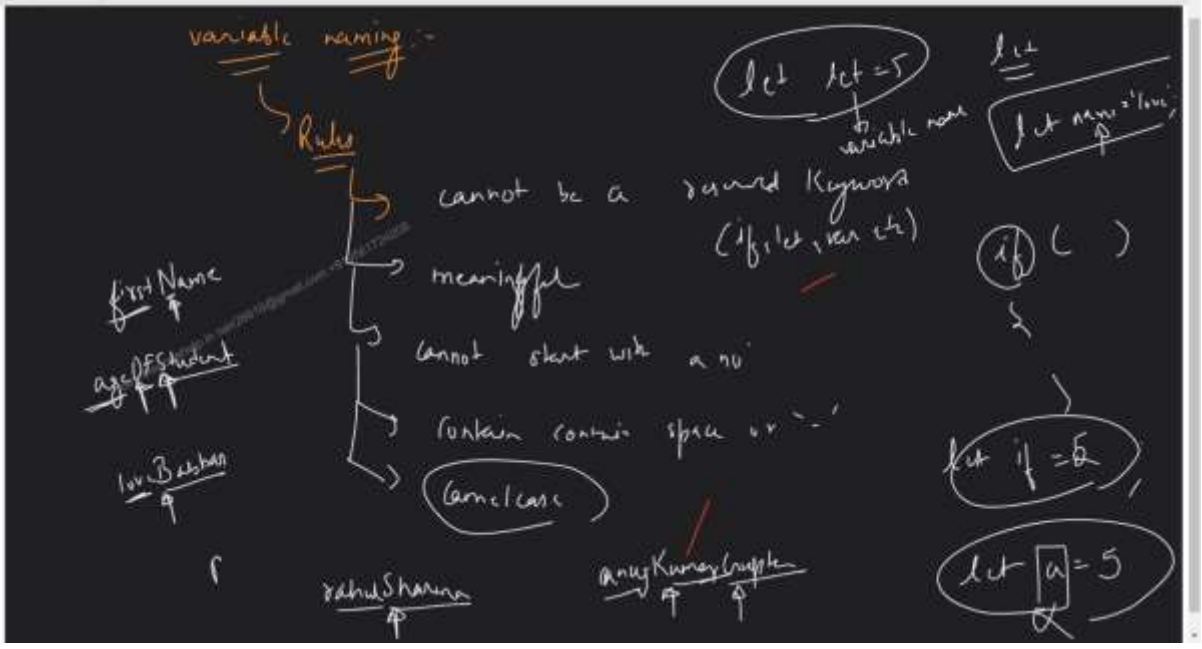
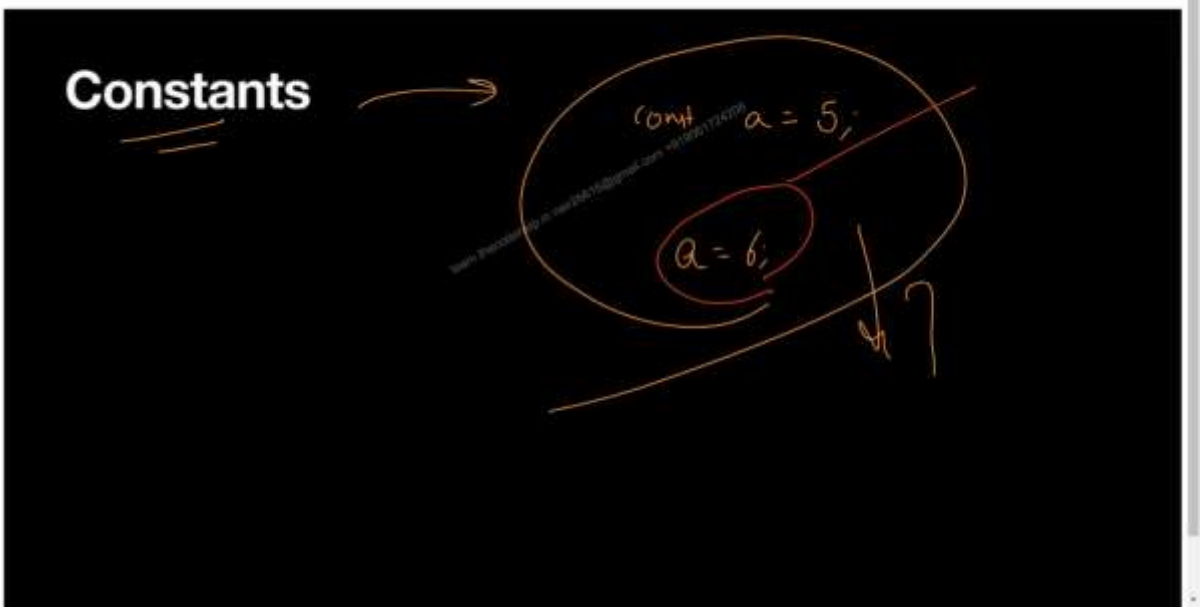
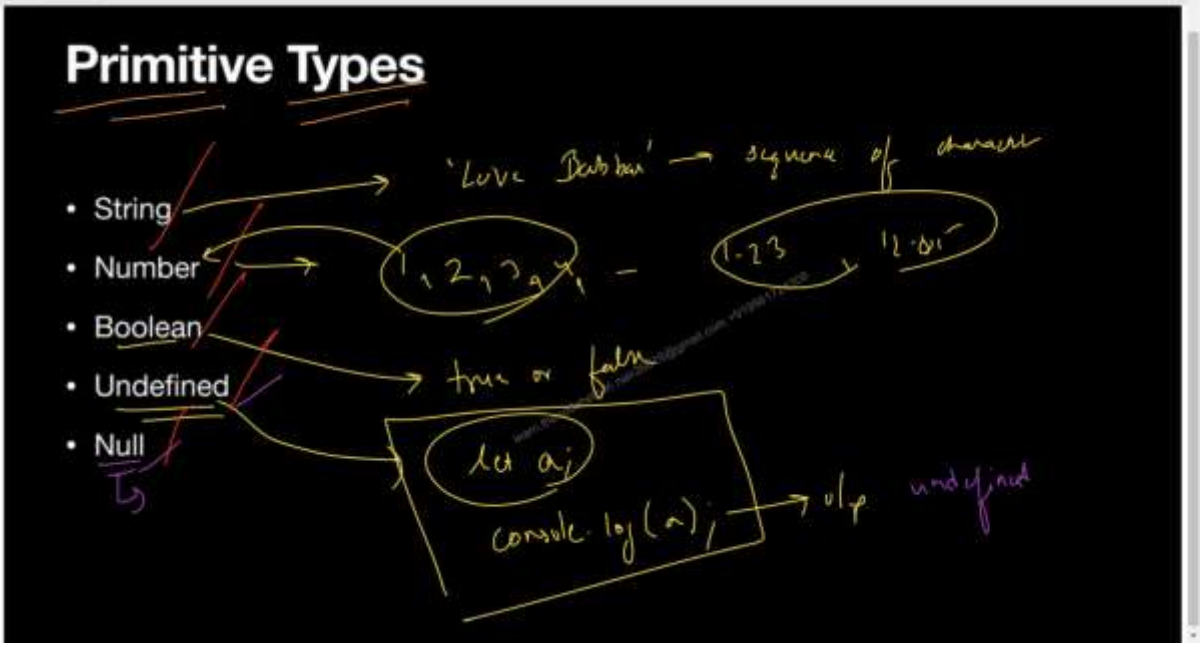
Variable
var
named memory location
variable name
5
num
let
var
let a = 5;
let name = 'Babbar';
let status = true;
let b = 17.5;
number literal
string literal
boolean literal
RAM

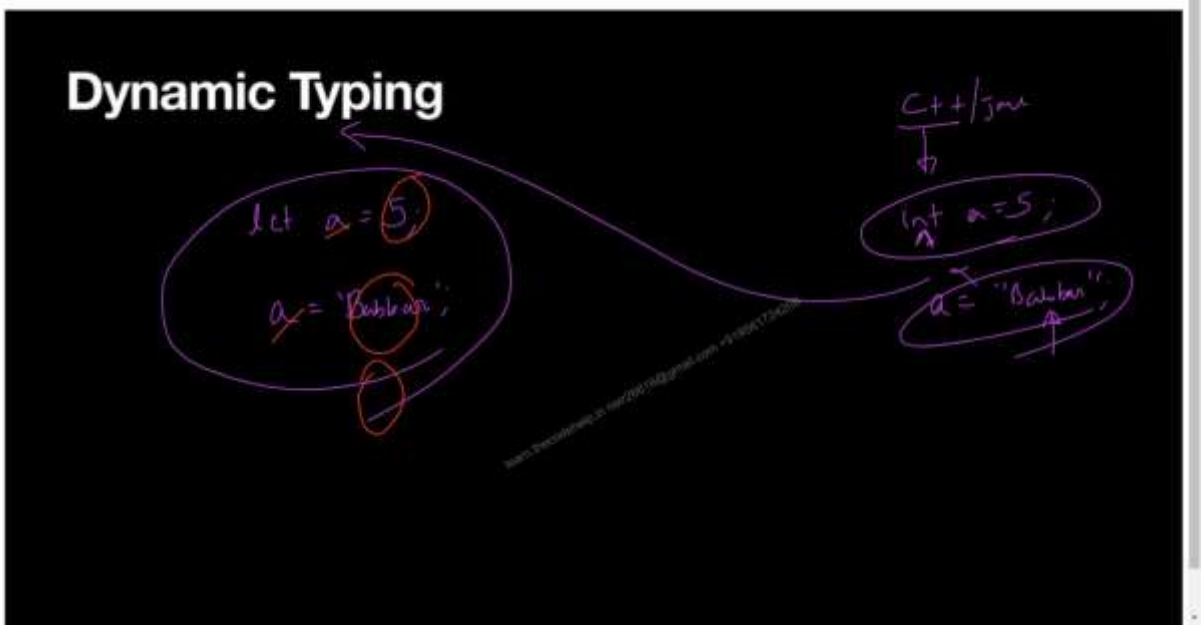

var
let
var
let a = 5
let a = 5
re-declaration
if (true)
let a = 5;
console.log(a);
console.log(a);
let a = 5;
let


variable naming :-
Rules
cannot be a reserved Keyword
meaningful
cannot start with a no
contain space
camelCase
firstName
ageOfStudent
let let = 5
let name = 'love'
if ( )
let if = 5
let a = 5


Constants
const a = 5;
a = 6;

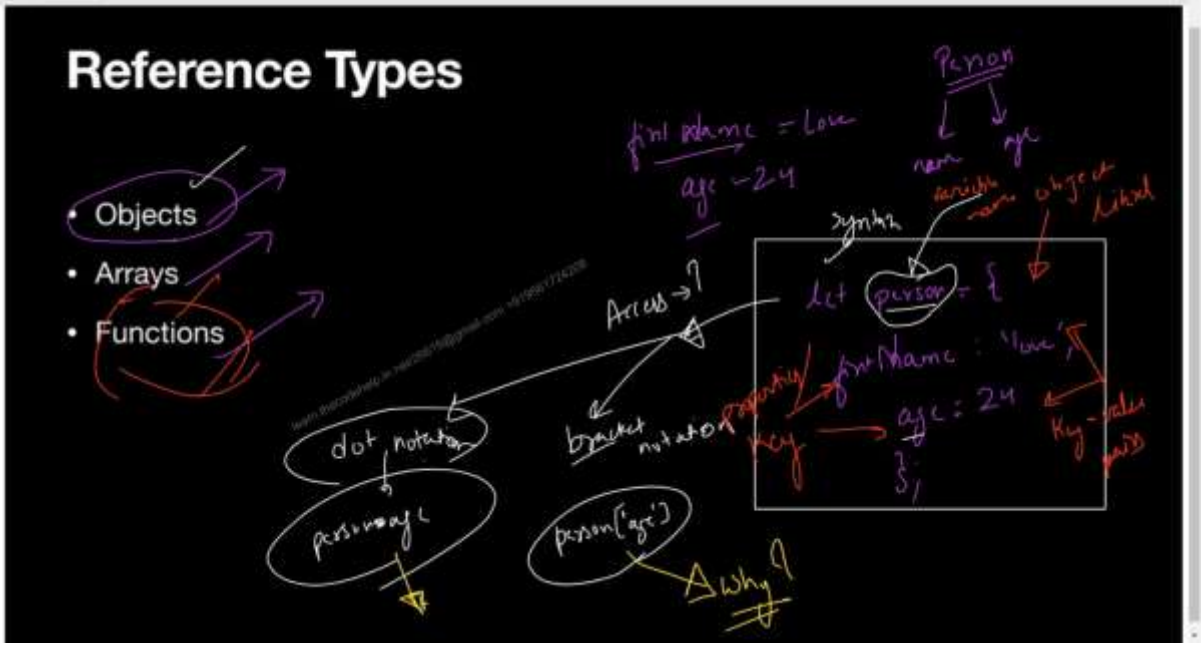

Primitive Types
String
Number
Boolean
Undefined
Null
'Love Babbar'
true or false
let a;
console.log(a);
o/p
undefined

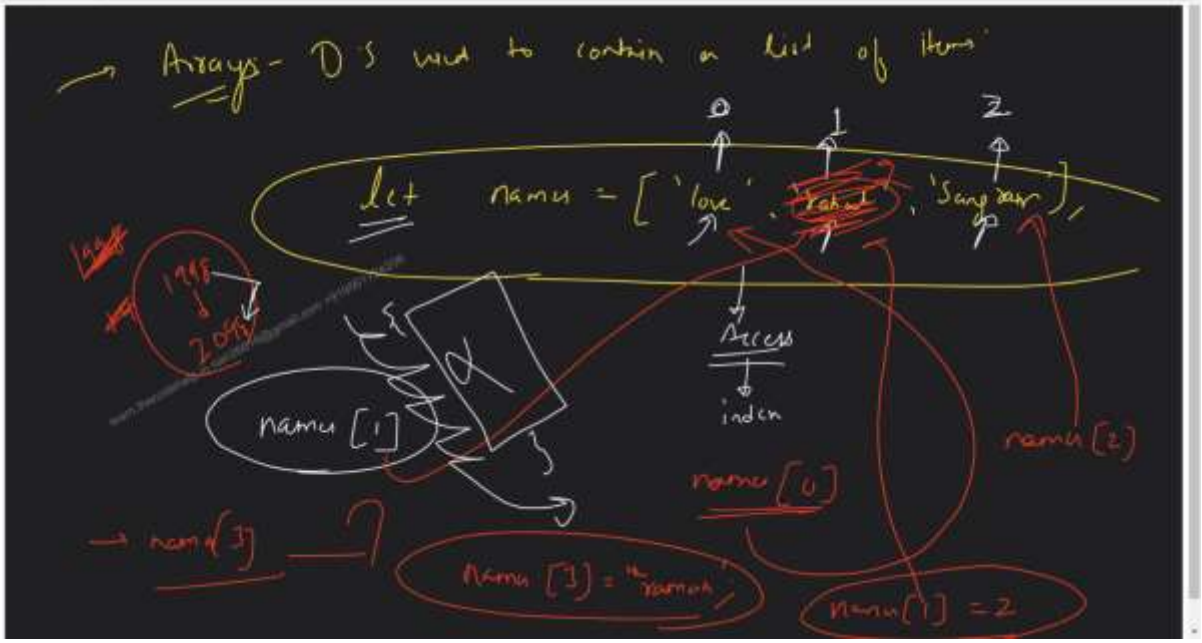
Dynamic Typing



Reference Types

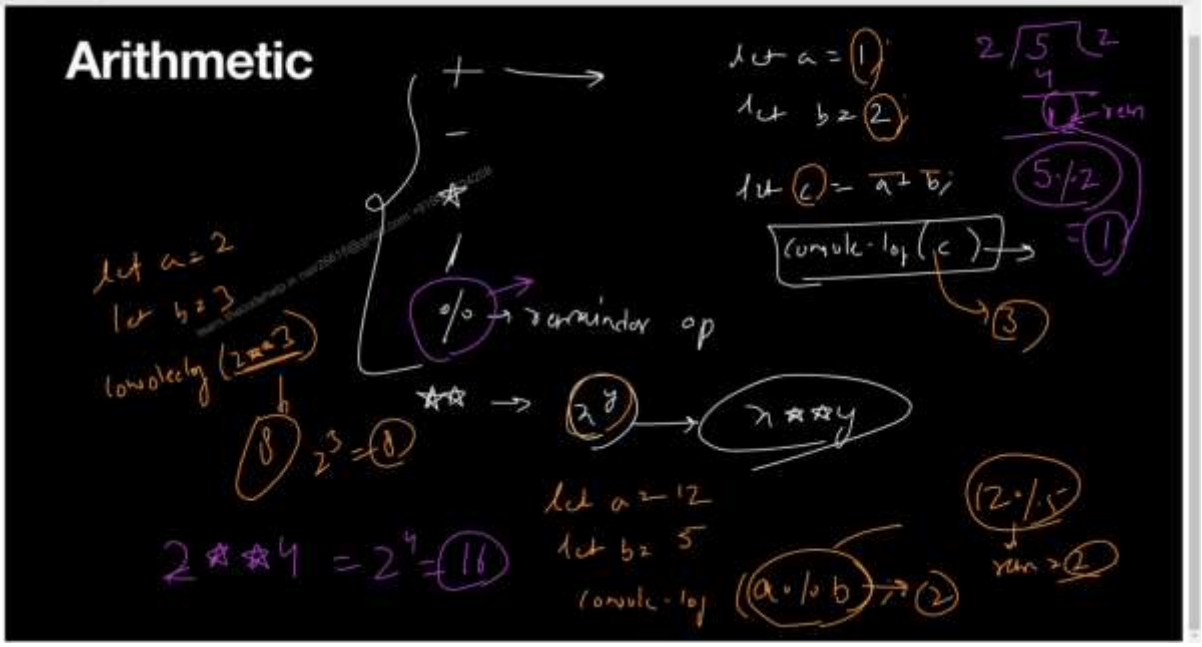
- Objects
- Arrays
- Functions

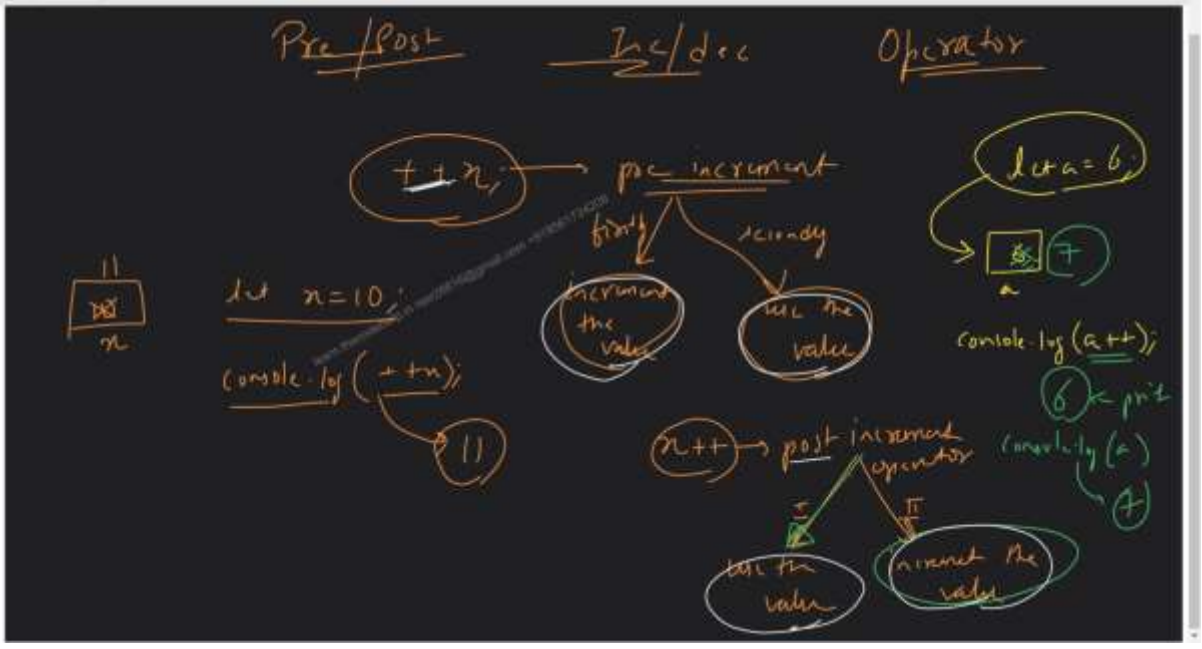


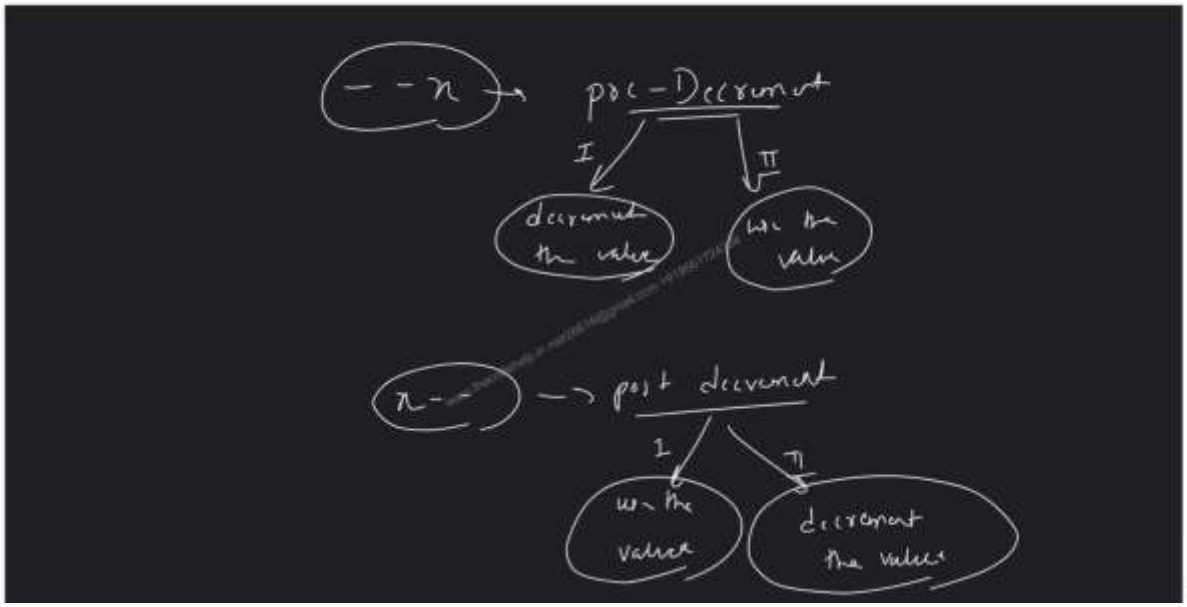


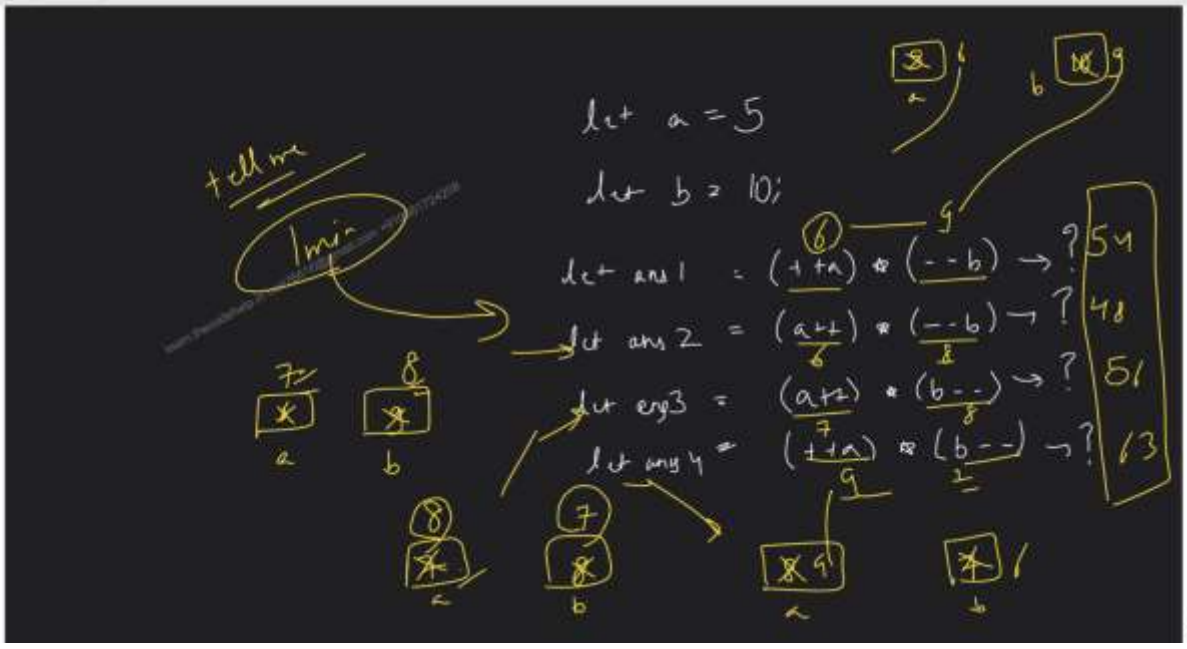
Operators

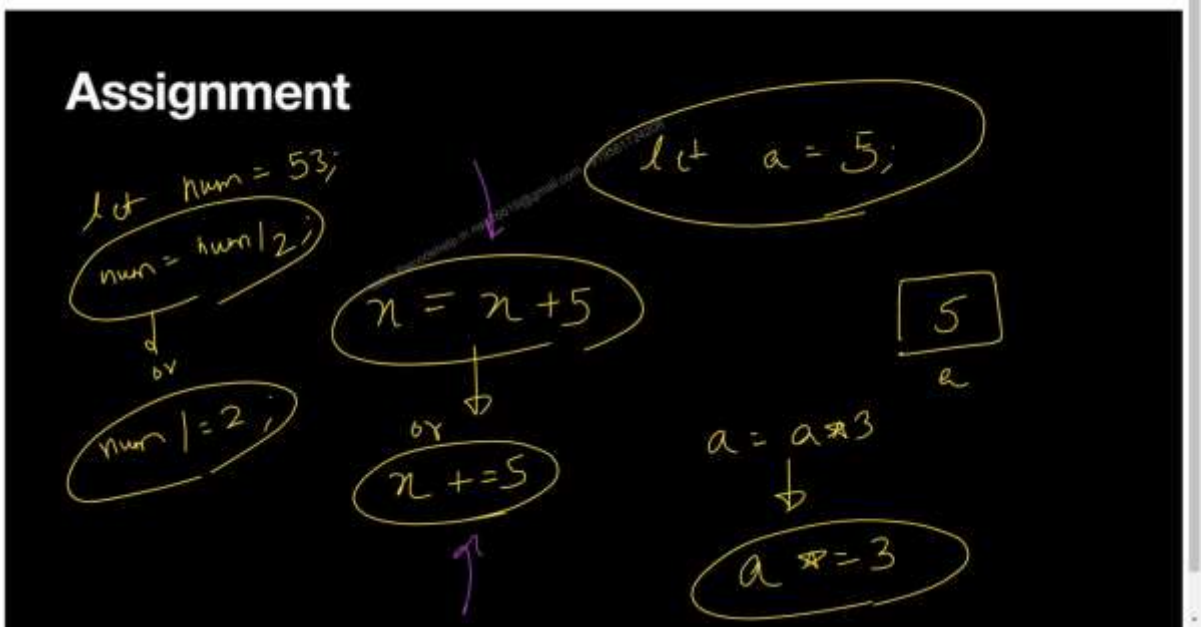
- Arithmetic
- Assignment
- Comparison
- Bitwise
- Logical

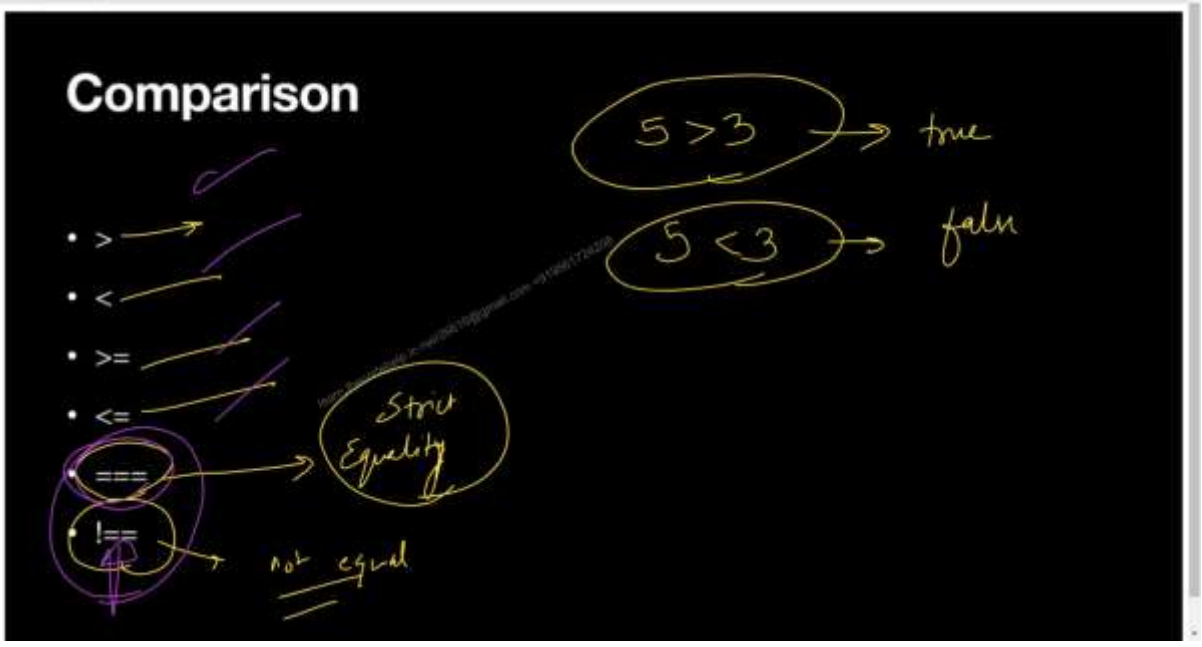

Arithmetic
+
-
*
/
%
remainder op
let a = 1;
let b = 2;
let c = a + b;
console.log(c)
3
let a = 2
let b = 3
console.log(2**3)
8
2**3 = 8
**
2 y
x**y
2**4 = 2^4 = 16
let a = 12
let b = 5
console.log
a % b
2
12 % 5
return 2
5 % 2
return 1
= 1

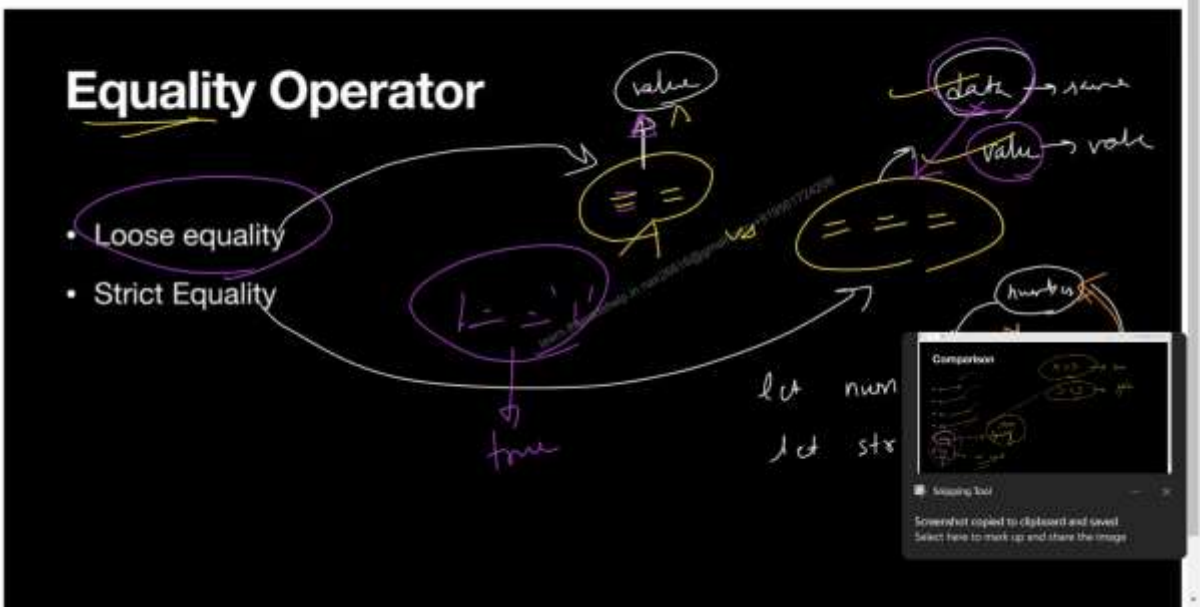

Pre/Post Inc/dec Operator
++x;
pre increment
firstly
secondly
increment the value
use the value
let x=10;
console.log(++x);
11
x
let a=6;
a
+
console.log(a++);
6
print
console.log(a)
7
x++
post increment operator
use the value
increment the value

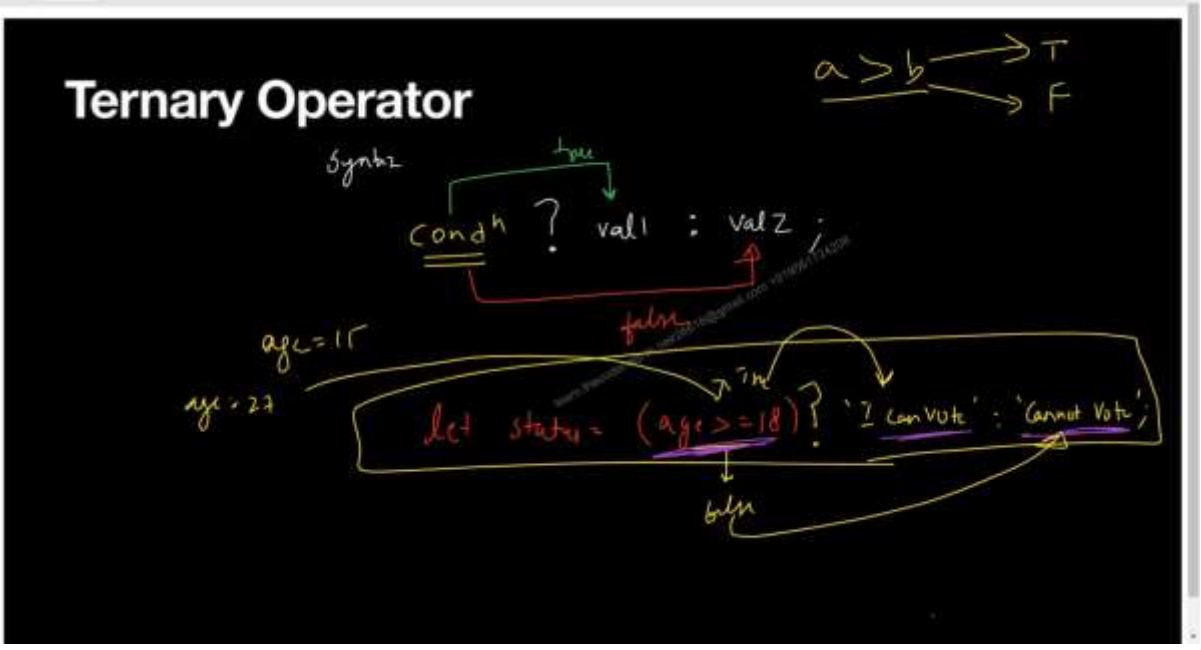

--n
pre-Decrement
I
II
decrement the value
use the value
n--
post decrement
I
II
use the value
decrement the value

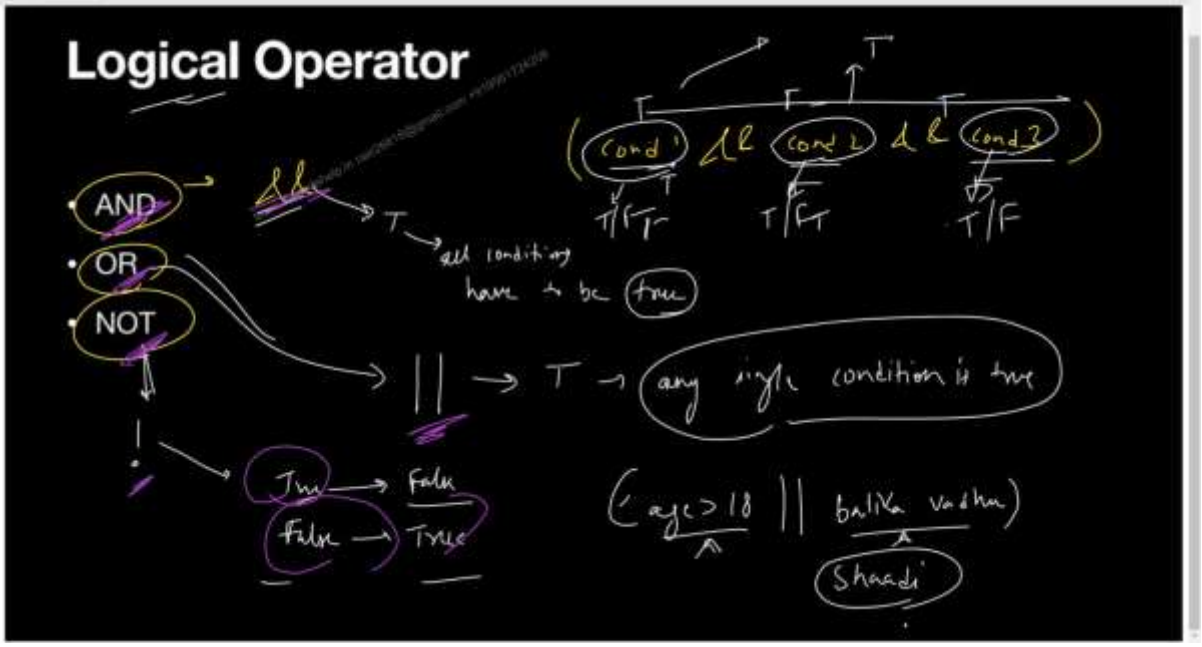

tell me
let a = 5
let b = 10;
let ans1 = (++a) * (--b) → ? 54
let ans2 = (a++) * (--b) → ? 48
let ans3 = (a++) * (b--) → ? 51
let ans4 = (++a) * (b--) → ? 63
a
b

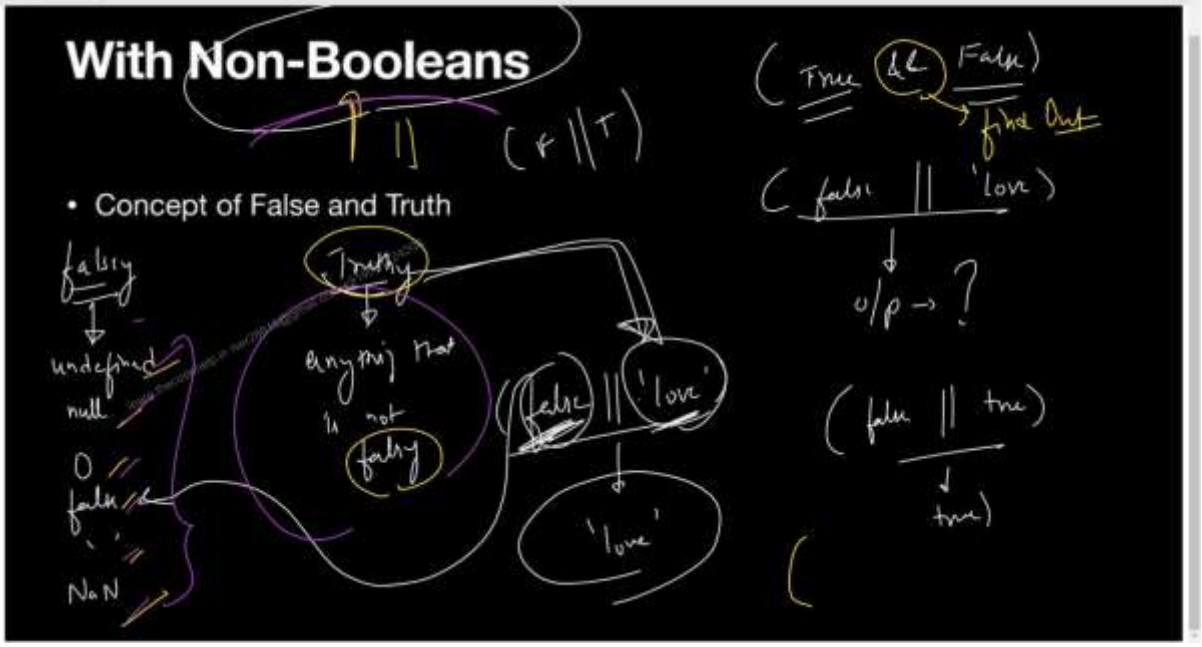

Assignment
let num = 53;
num = num/2;
or
num /=2;
x = x+5
or
x +=5
let a = 5;
5
a
a = a*3
a *=3


Comparison
5>3
true
5<3
false
>
<
>=
<=
===
Strict Equality
!==
not equal


Equality Operator
Loose equality
Strict Equality
value
data
value
true
let num
let str
Comparison
Snipping Tool
Screenshot copied to clipboard and saved
Select here to mark up and share the image


Ternary Operator
a > b
T
F
Syntax
true
condn ? val1 : val2 ;
false
age = 17
age = 27
let status = (age >= 18) ? 'Can Vote' : 'Cannot Vote';
true
false


Logical Operator
AND
OR
NOT
&&
T → all conditions have to be true
||
T → any single condition is true
!
True → False
False → True
(cond 1 && cond 2 && cond 3)
T/F T/F T/F
(age>18 || bahka vadhu)
Shaadi


With Non-Booleans
(F||T)
• Concept of False and Truth
falsy
undefined
null
0
false
NaN
Truthy
anything that is not falsy
(false || 'love')
'love'
(True && False)
final Out
(false || 'love')
o/p → ?
(false || true)
true)

Bitwise Operator

- Bitwise AND → &
- Bitwise OR → |

A	B	A & B
0	0	0
0	1	0
1	0	0
1	1	1

a	b	a | b
0	0	0
0	1	1
1	0	1
1	1	1

let a = 2 → 00000010

let b = 3 → 00000011

00000010 & 00000011 → 00000011 → 3

2 & 3 → 3

1 → True

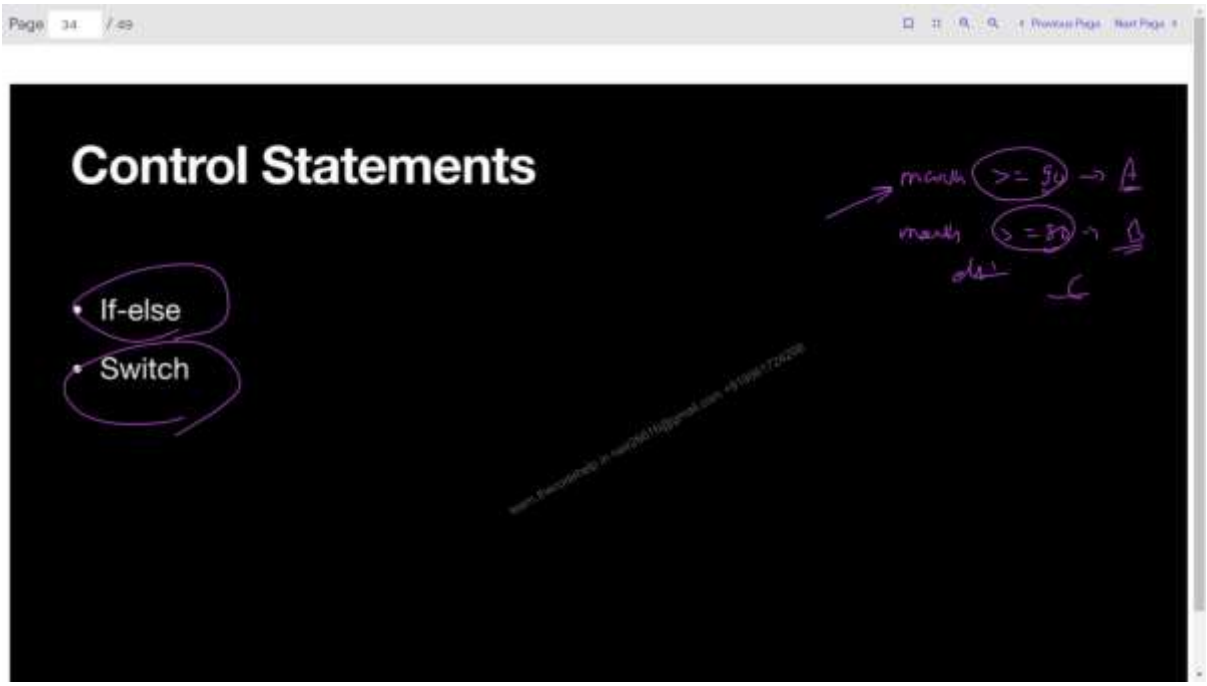
0 → false

Operator Precedence

let c = a + b * d / c;

Brackets

let c = (a + ((b * d) / c))




```
// line below is used to print on the console window
console.log('Namaste Dunia version4');

// let a = true;
// console.log(a);

// const num = 12;
// //num = 13;
```

```
// let lastName = 3;
// console.log(lastName);

// lastName = true;
// console.log(lastName);

// console.log(5 !== 3);

// let age = 27;
// let status = (age >= 18) ? 'Yes Vote' : 'No Vote';

// console.log(status);

// let marks = 12;

// if(marks >= 90) {
//     console.log('A');
// }
// else if(marks >= 80) {
//     console.log('B');
// }
// else if(marks >=70) {
//     console.log('C');
// }
// else if(marks >= 60) {
//     console.log('D');
// }
// else {
//     console.log('E');
//}

// let num = 1;

// switch(num) {
//     case 1: console.log('A');
//     break;
//     case 2: console.log('B');
//     break;
//     case 3: console.log('C');
//     break;
//     default: console.log('D');
// }


// for(let i = 1; i<=5; i=i+1) {
//     console.log("Babbar" + i);
// }

// let x = 1;

// while(x <= 5) {
//     console.log(x);
//     x++;
// }
```

```
let y = 1;

do {
    console.log(y);
    y++;
} while(y < 10);
```