

* Type Coercion : Automatic type conversion by JS

"I am" + 22 + " years old"

① "I am" + 22

(string) + (number)

↓ auto convert
string

"I am" + "22" (concatenation)

⇒ "I am 22"

② "I am 22" + " years old"

⇒ "I am 22 years old"

* $S + (N)$
 $S + (S)$ type coercion

⇒ because adding is possible
b/w strings are concatenation.

* $(S) - (N) \Rightarrow$ ~~$(S) - (S)$~~
 $(N) - N$ you cannot subtract

⇒ all other cases string is
converted to number because
other arithmetic operations are
not possible b/w strings.

① ${}^a 23 + 10 + 5$

a. ${}^a 23 + 10$

$(S) + (N)$
 $(3) + (5)$ type conversion

${}^a 23 + {}^a 10$
 $= {}^a 2310$

b. ${}^a 23 + 10 + 5$

${}^a 2310 + (5)$ type conversion

${}^a 2310 + {}^a 5$
 $\Rightarrow {}^a 23105$

② $5 + 10 + {}^a 23$

a. $5 + 10 = 15$

b. $(15) + {}^a 23$
 ${}^a 15 + {}^a 23$
 $\Rightarrow {}^a 1523$

③ $5 + {}^a 23 + 10$

a. $(5) + {}^a 23$
 ${}^a 5 + {}^a 23 = {}^a 523$

b. ${}^a 523 + (10)$
 ${}^a 523 + {}^a 10 = {}^a 52310$

④ ${}^a 23 - {}^a 10 + 5$

a. ${}^a 23 - {}^a 10$
 $\left[\begin{array}{c} 23 \\ - 10 \end{array} \right]$ type conversion
 $= 13 \rightarrow \text{Number}$

b. $13 + 5 = 18$

⑤ ${}^a 23 * 2$

$\Rightarrow 23 * 2 = 46$

⑥ ${}^a 23 / 2$

$\Rightarrow 23 / 2 = 11.5$

* == vs ===

① $10 == 10 \rightarrow \text{true}$

② $"10" == 10 \rightarrow \text{true}$

③ $"10" === 10 \rightarrow \text{false}$

values = 10, 10

dtype = string, number

④ $"10" === "10" \rightarrow \text{true}$

values = 10, 10

dtype = string, string

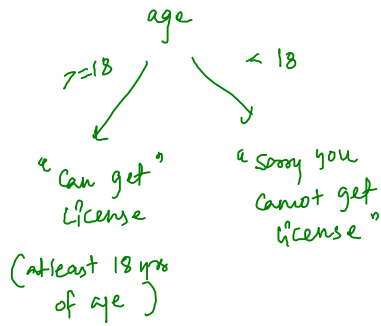
$X == Y$ (loose)

this only compares
values

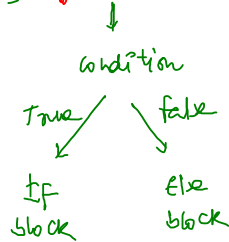
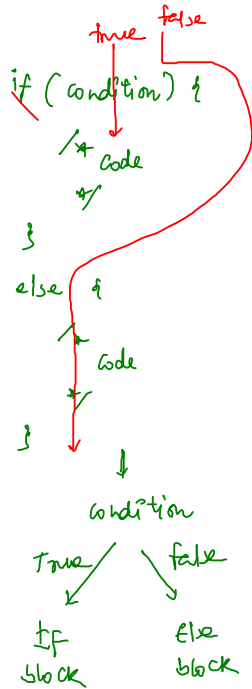
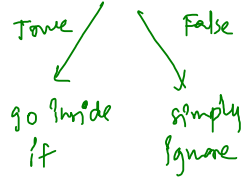
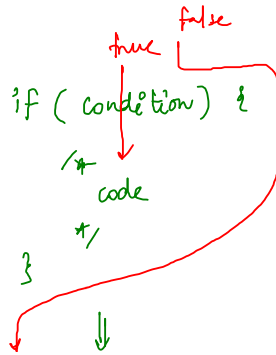
$X === Y$ (strict)

this compares both
value and data type

* If - else statements :



* you decide what to print based upon age.



* Experimenting with If - else :

①

```
367 const day = "wednesday";
368 if (day == "monday") {
369   console.log("I have to go for a doctor appointment");
370 }
371 if (day == "monday") {
372   console.log("I have to go for shopping");
373 }
374 if (day == "tuesday") {
375   console.log("I have an exam");
376   console.log("I have a wedding to attend");
377 } else {
378   console.log("I dont know what to do");
379 }
```

378

③

```
367 const day = "monday";
368 if (day == "monday") {
369   console.log("I have to go for a doctor appointment");
370 } else {
371   console.log("I dont know what to do");
372 }
373 if (day == "monday") {
374   console.log("I have to go for shopping");
375 }
376 if (day == "tuesday") {
377   console.log("I have an exam");
378   console.log("I have a wedding to attend");
379 }
```

369, 374

②

```
367 const day = "monday";
368 if (day == "monday") {
369   console.log("I have to go for a doctor appointment");
370 }
371 if (day == "monday") {
372   console.log("I have to go for shopping");
373 }
374 if (day == "tuesday") {
375   console.log("I have an exam");
376   console.log("I have a wedding to attend");
377 } else {
378   console.log("I dont know what to do");
379 }
```

369, 372, 378

④

```
367 const day = "tuesday";
368 if (day == "monday") {
369   console.log("I have to go for a doctor appointment");
370 } else {
371   console.log("I dont know what to do");
372 }
373 if (day == "monday") {
374   console.log("I have to go for shopping");
375 }
376 if (day == "tuesday") {
377   console.log("I have an exam");
378   console.log("I have a wedding to attend");
379 }
```

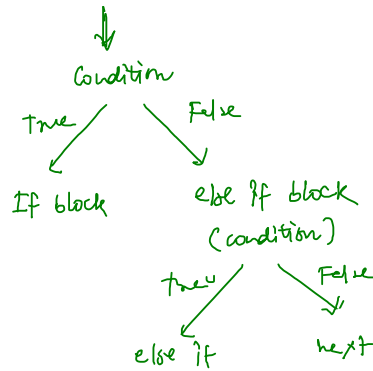
371, 377, 378

* Else - if statements

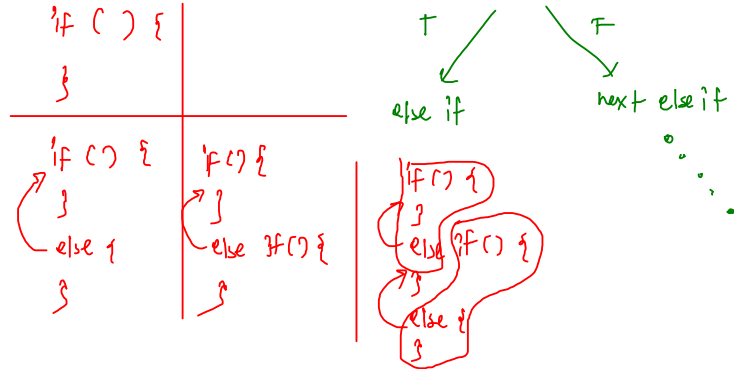
```

360 const day = "abcd";
361
362 if (day == "monday") {
363   console.log("Plan course structure");
364 } else if (day == "tuesday") {
365   console.log("Prepare for exams");
366 } else if (day == "wednesday") {
367   console.log("Write examples for coding lectures");
368 } else if (day == "thursday") {
369   console.log("Watch recordings");
370 } else if (day == "friday") {
371   console.log("solve assignments");
372 } else if (day == "saturday") {
373   console.log("Revise all notes");
374 } else if (day == "sunday") {
375   console.log("attempt contest");
376 } else {
377   console.log("Please enter a valid day");
378 }

```



* Always else/
else if is
attached a previous
if statement.

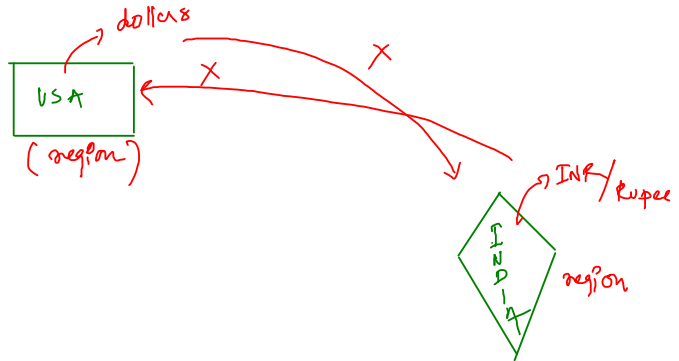
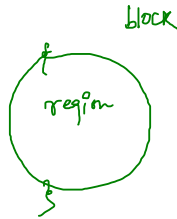


★ Scope of a variable (Basic):

```
380 const age = 18;
381
382 if (age >= 21) {
383   let canDrinkAlcohol = true;
384 } else {
385   let canDrinkAlcohol = false;
386 }
387
388 console.log(canDrinkAlcohol);
```

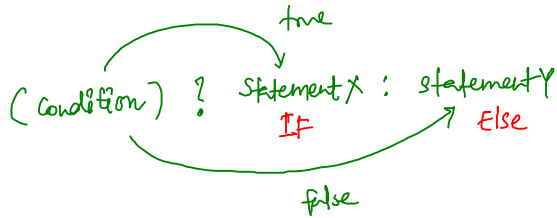
⇒ canDrinkAlcohol is created
inside if, else statements hence
it is accessible in those regions
only.

JS doesn't
know about
this variable
★ not defined
Reference Error.



* Ternary operator :

(short hand IF else)



```
391 // ternary operator
392 // much helpul in React
393 age >= 21
394 ? console.log("Can Drink Alcohol")
395 : console.log("Cannot drink Alcohol");
```