* Type Coercion : (Automatic type conversion by JS)

"I am " + 22 + " years old"

* S + N
⇒ S + S type coercion

because add is possible with string ⇒ concat

① "I am " + 22

- you are adding string + number
- automatically / internally JS converts the number → string

"I am " + 22 ⇒ "I am " + "22"

string + number → string + string

⇒ "I am 22"

② "I am 22" + " year old"

string + string

⇒ "I am 22 year old"

① "23" + 10 + 5

a. "23" + 10 ⇒ "23" + "10"
string + number S + S

⇒ "2310"

b. "23" + 10 + 5
"2310" + 5 ⇒ "2310" + "5"
S + N S S

⇒ "23105"

② 5 + 10 + "23"

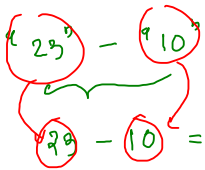
a. 5 + 10 ⇒ 15
N N

b. 5 + 10 + "23"
15 + "23" ⇒ "15" + "23"
N + S S + S

⇒ "1523"

③ 5 + "23" + 10
"5" + "23" + 10
"523" + 10
"523" + "10" = "52310"

④ "23" − "10" + 5

a. 

b. 13 + 5 = 18

* S → N
(this happens if the operator is not "+")

⇒ Because "−", "*", "/", etc... are not possible when strings here S → N.

⑤ "23" * 2

23 * 2

= 46

⑥ "23" / "2"

23 / 2

= 11.5

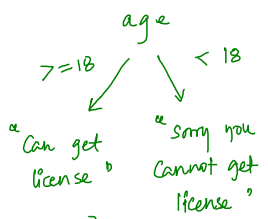
* `===` vs `==` :

* `==` doesn't care abt datatype, it looks only at value (loose check)

* `===` checks both value and datatype. (strict check)

1. `10 == 10` ⇒ true
2. `"10" == "10"` ⇒ true
3. `10 == "10"` ⇒ true
4. `10 === 10` ⇒ true → values 10, 10 → dtype N, N } T
5. `"10" === "10"` ⇒ true → value 10, 10 → dtype S, S } T
6. `10 === "10"` ⇒ false → value 10, 10 ✓ → dtype N, S ✗ } F

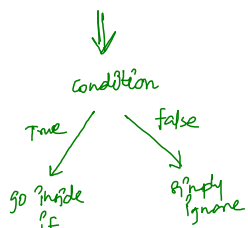
* If - else statements :



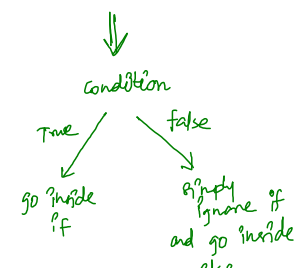
(atleast 18yrs)

* you need decide what to print based upon the age.
* Control structures
  - controlling the flow of the code.

```
if ( condition ) {
    /* block of
       code
    */
}
```




```
if ( condition ) {
    /* block of
       code
    */
}
else {
    /* block of
       code
    */
}
```



★ Experimenting with If - else :

```
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 weddding to attend");
377  } else {
378    console.log("I dont know what to do");
379  }
```

```
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 weddding to attend");
377  } else {
378    console.log("I dont know what to do");
379  }
```

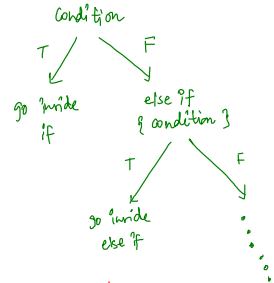
```
367  const day = "monday";
368  if (day == "monday") {
369    console.log("I have to go for a doctor appointment");
370  } else {
371    console.log("I dont know what to do");
372  }
373  if (day == "monday") {
374    console.log("I have to go for shopping");
375  }
376  if (day == "tuesday") {
377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

```
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 weddding to attend");
379  }
```

⇒ Always an else is attached to nearest If, you can have as many If statements you want without any else, but you cannot use else without an If.

★ else-if statement :

```
// else if statements
const day = "abcdef";

if (day == "monday") {
  console.log("Plan course structure");
} else if (day == "tuesday") {
  console.log("Prepare for exams");
} else if (day == "wednesday") {
  console.log("Write examples for coding lectures");
} else if (day == "thursday") {
  console.log("Watch recordings");
} else if (day == "friday") {
  console.log("solve assignments");
} else if (day == "saturday") {
  console.log("Revise all notes");
} else if (day == "sunday") {
  console.log("attempt contest");
} else {
  console.log("Please enter a valid day");
}
```




```
if (condition) {

}
```

```
if (condition) {

}
else {

}
```

```
if (condition1) {

}
else if (condition2) {

}
```

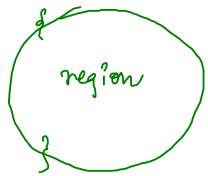
```
if (condition1) {

}
else if (condition2) {

}
else {

}
```

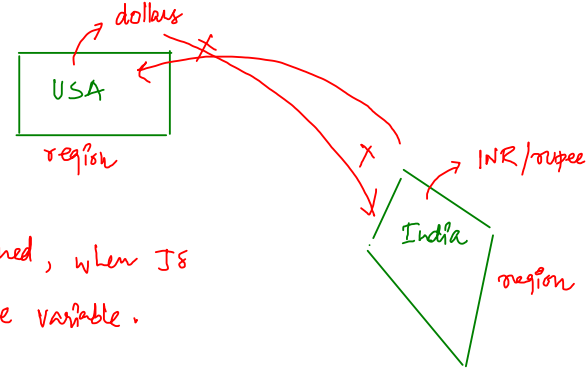
★ Scope of a variable (Basic) :

```
373  const birthYear = 1998;
374  if (birthYear <= 2000) {
375    let century = 20;
376  } else {
377    let century = 21;
378  }
379  console.log(century);
```

⇒ Century variable is created inside if-else statements hence it is accessible in those regions only.

JS doesn't know what century is





★ ReferenceError : Not defined, when JS doesn't know about some variable.

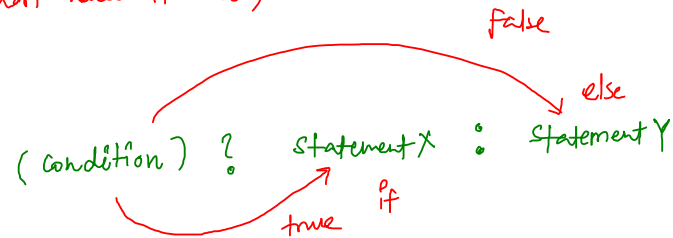
★★ undefined vs not-defined

undefined → dtype empty value,

not-defined → variable itself is not present

* Ternary operator :

(short hand If else)




```
// Ternary operator
const age = 22;

if (age >= 21) {
  console.log("You can drink alcohol");
} else {
  console.log("You cannot drink alcohol");
}

age >= 21
  ? console.log("You can drink alcohol")
  : console.log("You cannot drink alcohol");
```