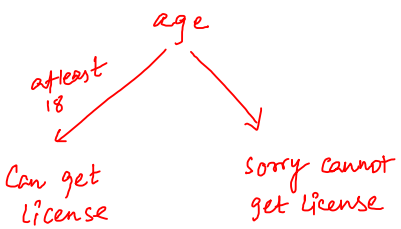
★ If - else statements

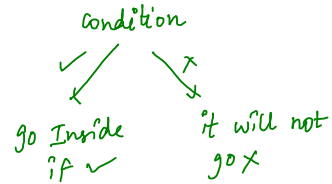


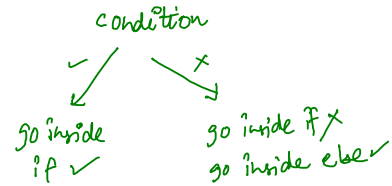
→ We have to take decisions based on something/value

→ Control structures (It is controlling the flow of program)

★
```
if (condition) {
    /* code */
}
else {
    /* code */
}
```

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

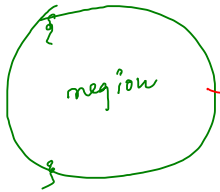




* Scope in brief / basic :

```
261  const birthYear = 1998;
262  if (birthYear <= 2000) {
263    let century = 20;
264  } else {
265    let century = 21;
266  }
267  console.log(century);
```

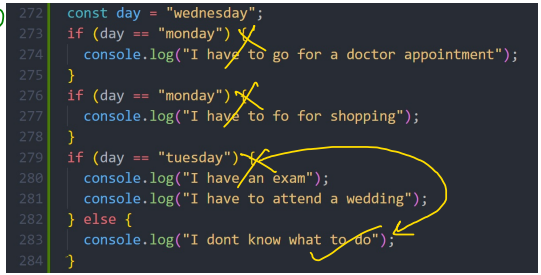
→ century variable is born inside if statement hence it is available in that region only.



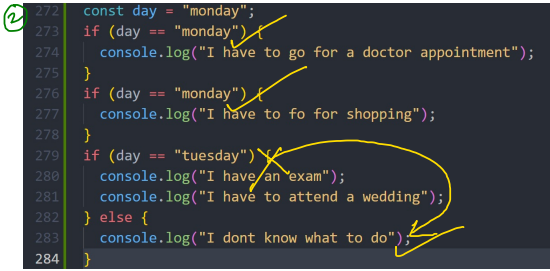
→ variables declared in this region are not accessible outside this.

→ When JS doesnt know about some variable it gives an "Reference Error".

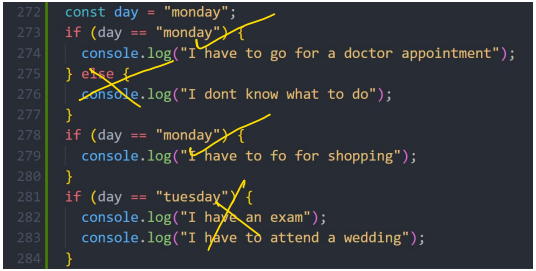
★ Experimenting with if-else statements :

① 

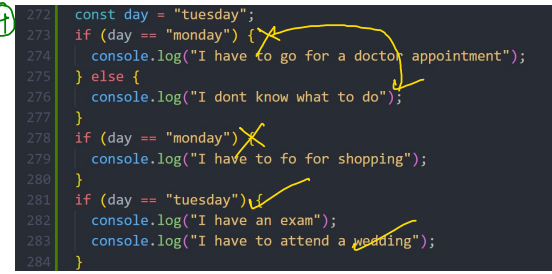
```
const day = "wednesday";
if (day == "monday") {
  console.log("I have to go for a doctor appointment");
}
if (day == "monday") {
  console.log("I have to fo for shopping");
}
if (day == "tuesday") {
  console.log("I have an exam");
  console.log("I have to attend a wedding");
} else {
  console.log("I dont know what to do");
}
```

② 

```
const day = "monday";
if (day == "monday") {
  console.log("I have to go for a doctor appointment");
}
if (day == "monday") {
  console.log("I have to fo for shopping");
}
if (day == "tuesday") {
  console.log("I have an exam");
  console.log("I have to attend a wedding");
} else {
  console.log("I dont know what to do");
}
```

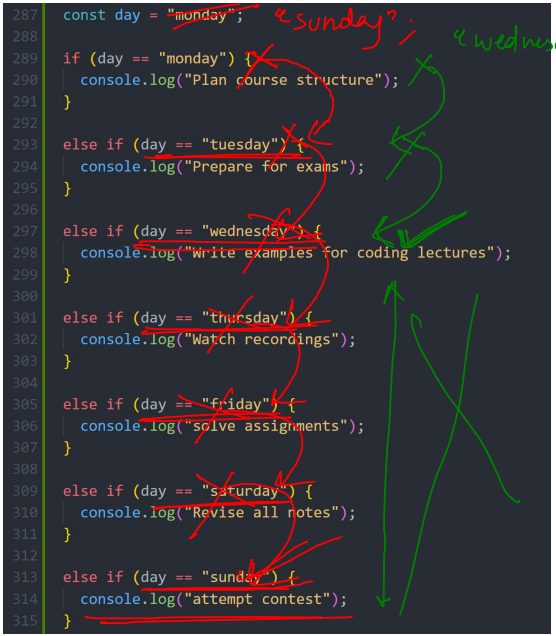
③ 

```
const day = "monday";
if (day == "monday") {
  console.log("I have to go for a doctor appointment");
} else {
  console.log("I dont know what to do");
}
if (day == "monday") {
  console.log("I have to fo for shopping");
}
if (day == "tuesday") {
  console.log("I have an exam");
  console.log("I have to attend a wedding");
}
```

④ 

```
const day = "tuesday";
if (day == "monday") {
  console.log("I have to go for a doctor appointment");
} else {
  console.log("I dont know what to do");
}
if (day == "monday") {
  console.log("I have to fo for shopping");
}
if (day == "tuesday") {
  console.log("I have an exam");
  console.log("I have to attend a wedding");
}
```

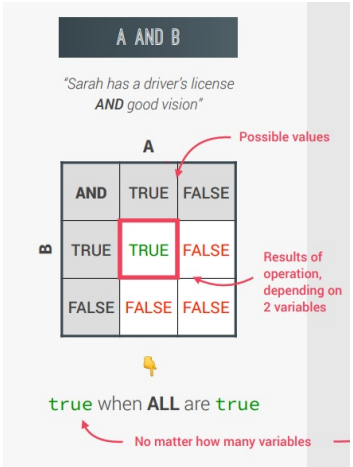
→ always else is attached with nearest if, you can use as many if statement you want without using else, but without if you cannot use an else statement.



* else if :

→ works same as else statement but it also checks for condition

→ same as else it is attached previous if statement.



A and B ⇒ Both statements should satisfy ⇒ should be true

↘ T ⇒ A, B = T

⇒ A and B

T and T → T

T and F → F

F and T → F

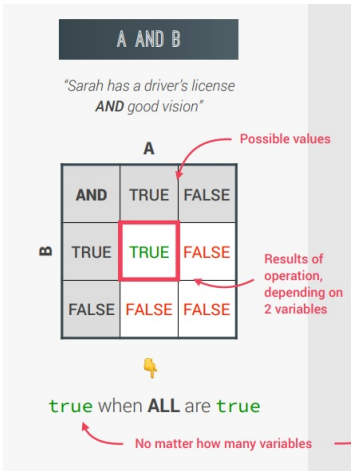
F and F → F

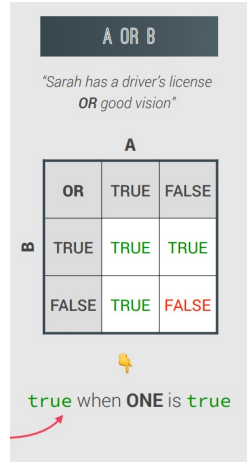
EXAMPLE:

A: Sarah has a driver's license → T/F

B: Sarah has good vision → T/F

Boolean variables that can be either TRUE or FALSE





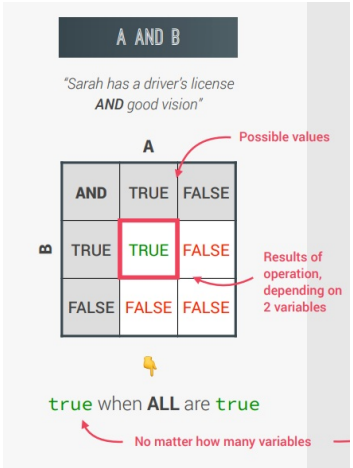
A or B → either one of them should satisfy
⇒ atleast one statement should be true.

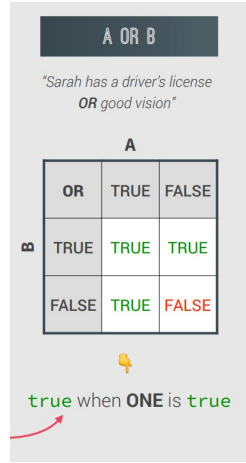
T or F → T
T or T → T
F or T → T
F or F → F

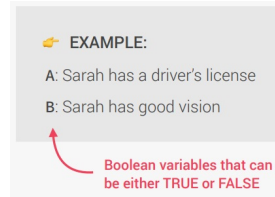
EXAMPLE:
A: Sarah has a driver's license
B: Sarah has good vision
Boolean variables that can be either TRUE or FALSE

A or B or C or D
⇒ F or F or F or T → T
⇒ F and F and F and T → F
⇒ T and T and T and T → T

① Amrag and Rahul are going to a movie → T
② Amrag or Rahul are going to a movie → T
Both, either one of them







NOT (false) → true

NOT (true) → false

BOOLEAN VARIABLES

```
age = 16
```

- **A**: Age is greater or equal 20 — `false`
- **B**: Age is less than 30 — `true`

LET'S USE OPERATORS!

- `!A` (`false`) — `true`
- `A AND B` (`false` `true`) — `false`
- `A OR B` (`false` `true`) — `true`
- `!A AND B` (`true` `true`) — `true`
- `A OR !B` (`false` `false`) — `false`