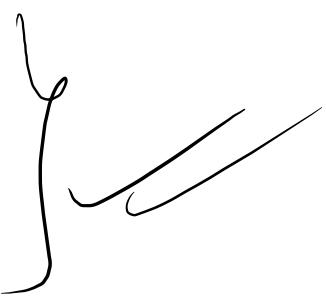


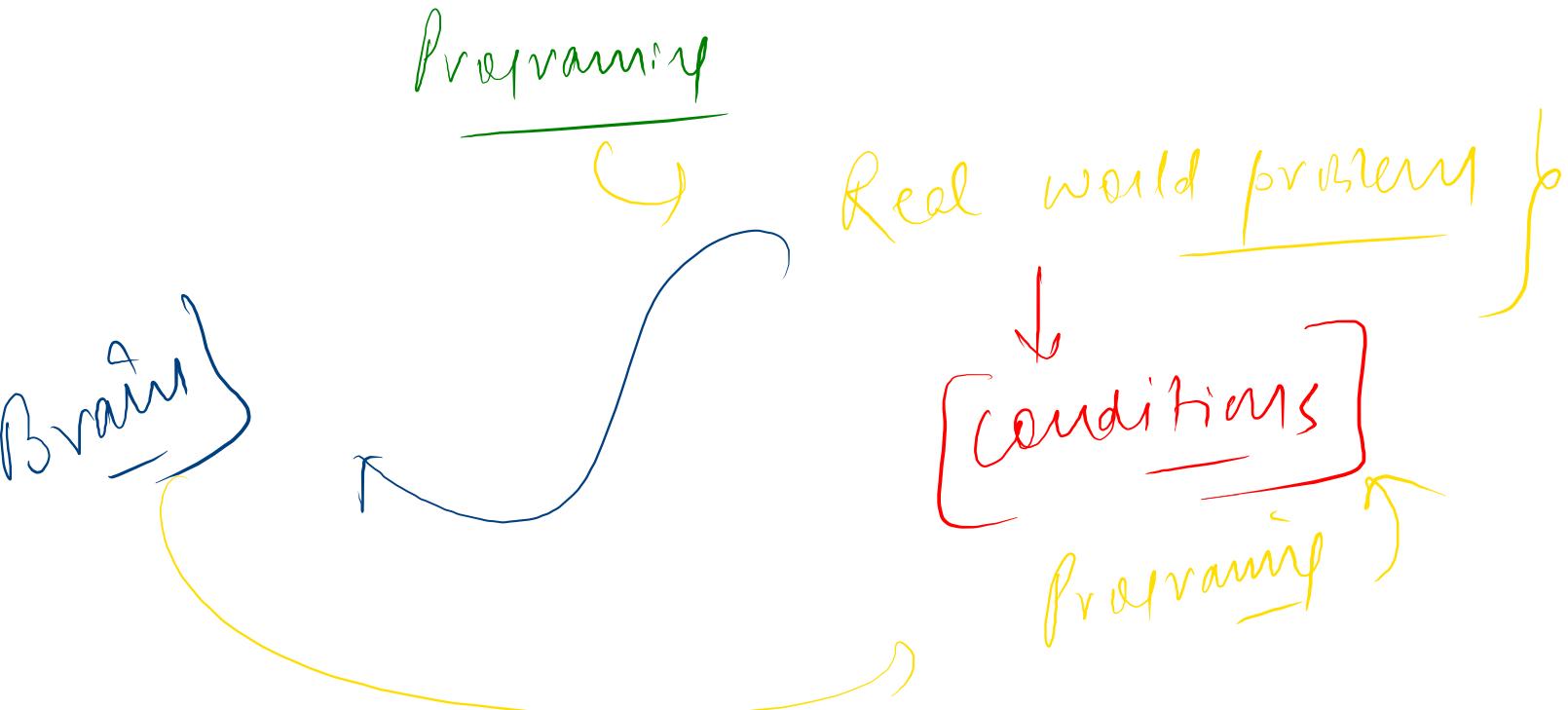
Conditionals

- ① Models
  - ② vs code
- 

Conditionals }

Tinder }





if block }      Boolean | true/false )

var a = 10  
var b = 2      Boolean | true/false )

if( b != 0){  
 console.log('Inside if block')  
 console.log(a/b)  
}

console.log("After if")

Condition brace }

Y

condition

↳

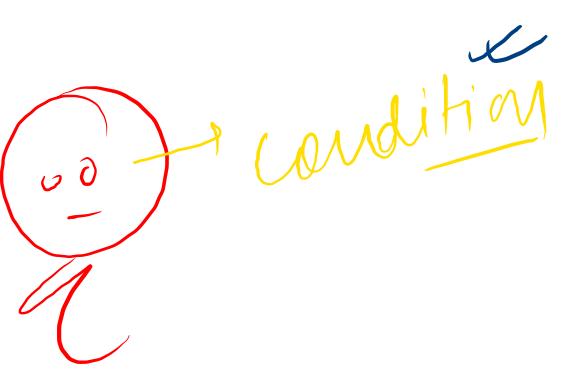
Boolean | True/False

if ( expression ) {

    ≡

    ↳ execute ↳

}



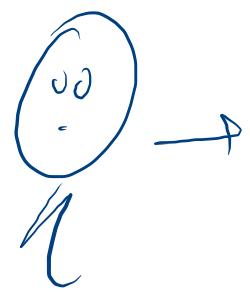
if ( )

=

else



if - else block }



num

$\text{num}/2 \rightarrow \text{even}$

otherwise  $\rightarrow \text{odd}$

A handwritten diagram on a whiteboard illustrating a conditional statement. A large curly brace on the left covers the entire code block. Above the brace, the word 'if' is written vertically. To the right of the brace, the word 'condition' is written diagonally above the condition part of the code. A green curved arrow points from the word 'else' down to the closing brace. A red 'X' is placed next to the closing brace. The code itself is:  
if(num % 2 ==0){  
 console.log("Num is even")  
} else{  
 console.log('num is odd')  
}

```
if(num % 2 ==0){  
    console.log("Num is even")  
} else{  
    console.log('num is odd')  
}
```

↳ conditionals ]

```
var num = 24
```

//Check if it's even

```
if(num % 2 == 0){  
    console.log("Num is even")  
}else{  
    console.log('num is odd')  
}
```

if/else }

```
console.log( (num%2 ==0) ? "Num is even" : "Number is odd" )
```

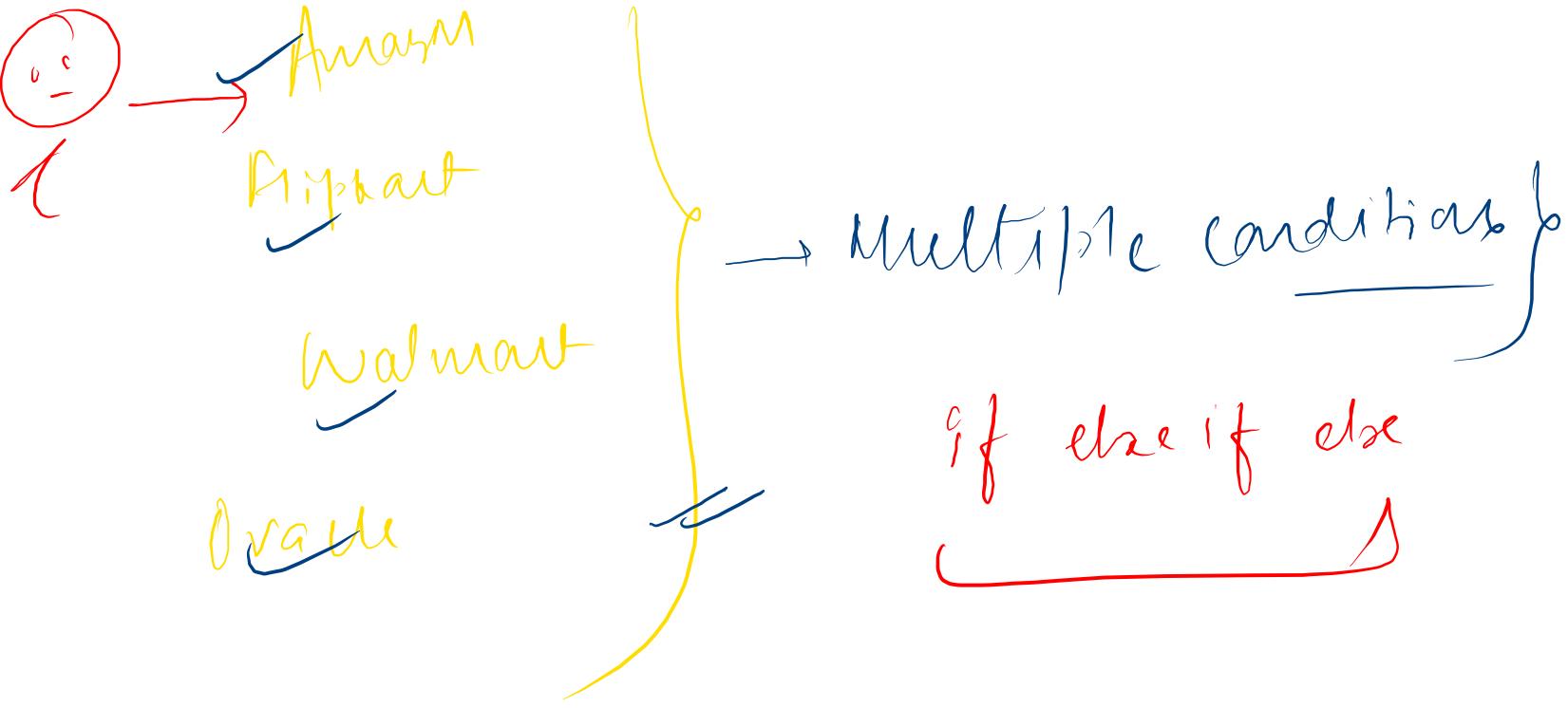
if

else

==

Ternary operation

condition true ←  
false answer } if the }  
{}  
ternary }



1) ~~var num = 20~~ 23

// Check if the number is divisible by 2 or 3 or 5 or not by any of these

```
if( num %2 ==0){  
    console.log("num is divisible by 2")  
  
} else if (num %3 ==0){  
    console.log("num is divisible by 3")  
} else if (num %5 ==0){  
    console.log("num is divisible by 5")  
} else{  
    console.log("num is not divisible by 2 or 3 or 5")  
}
```

curve after if statement

Multiple conditions  
If - else - if - else

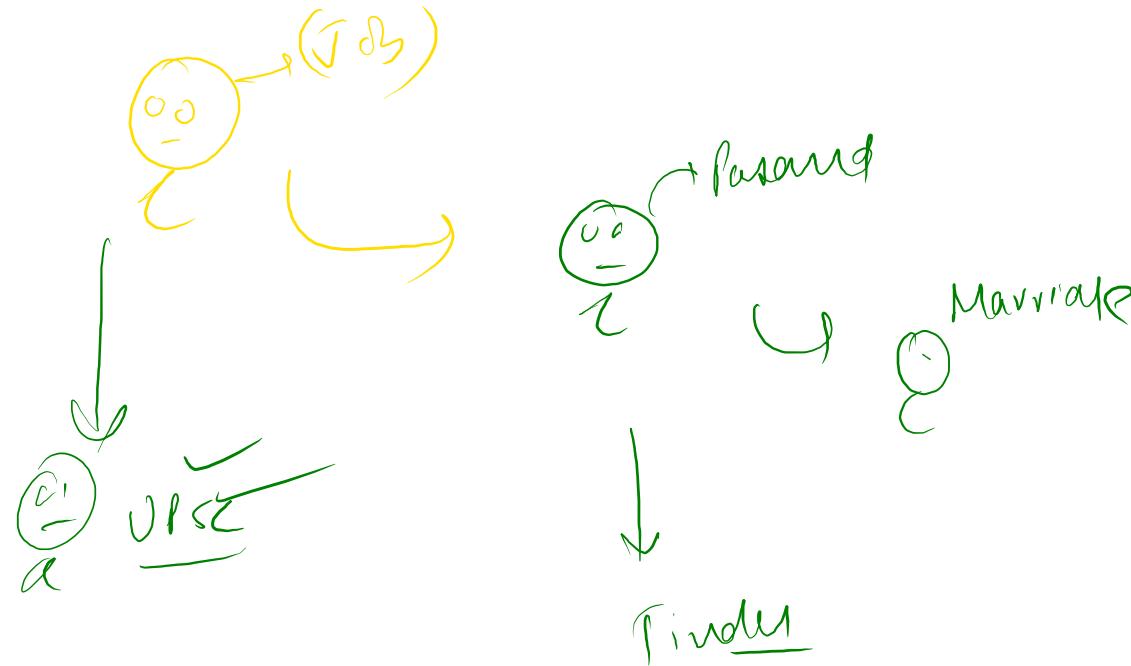
①

②

use + optimal

The diagram illustrates the relationship between conditional statements and ternary operators. At the top left, the word "ternary" is written in yellow, with a large curly brace underneath it. To its right, the words "Conditions" and "}" are also written in yellow. Below this, a red smiley face character is connected by a green arrow to the word "if". A large green curly brace groups the "if" statement and the ternary operator. To the right of the "if" statement, another red smiley face character is connected by a red arrow to the word "else". Above this "else" character, the word "Ballent" is written in red. Below the "else" character, the words "(if)" and "->" are written in yellow. To the right of the "else" character, a large yellow curly brace groups the "else" part and the ternary operator. The word "ternary operator" is written in yellow next to this brace. At the bottom center, a red smiley face character is connected by a red arrow to the word "else if". To the right of this character, the words "if", "else if", "else if", and "else" are written vertically in yellow. A large yellow curly brace groups these four lines of text. A red line connects the "else if" character at the bottom to the "else" character above it.

Condition  
↳ Condition }



condition

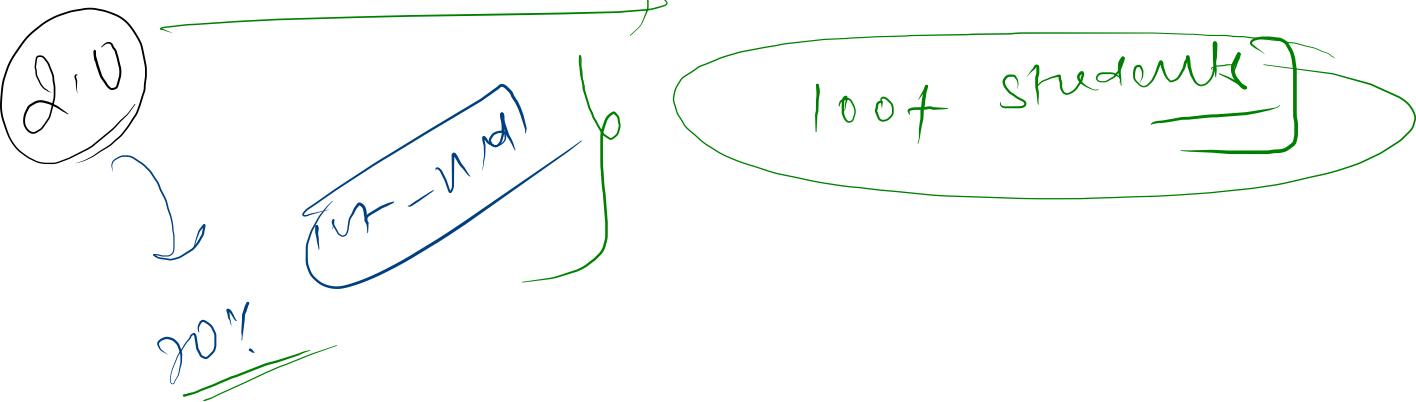
→ condition

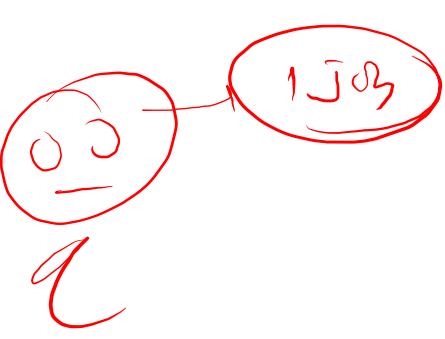
Altered conditionals

↑ Very common



Rint path/guidance





# Nested conditionals

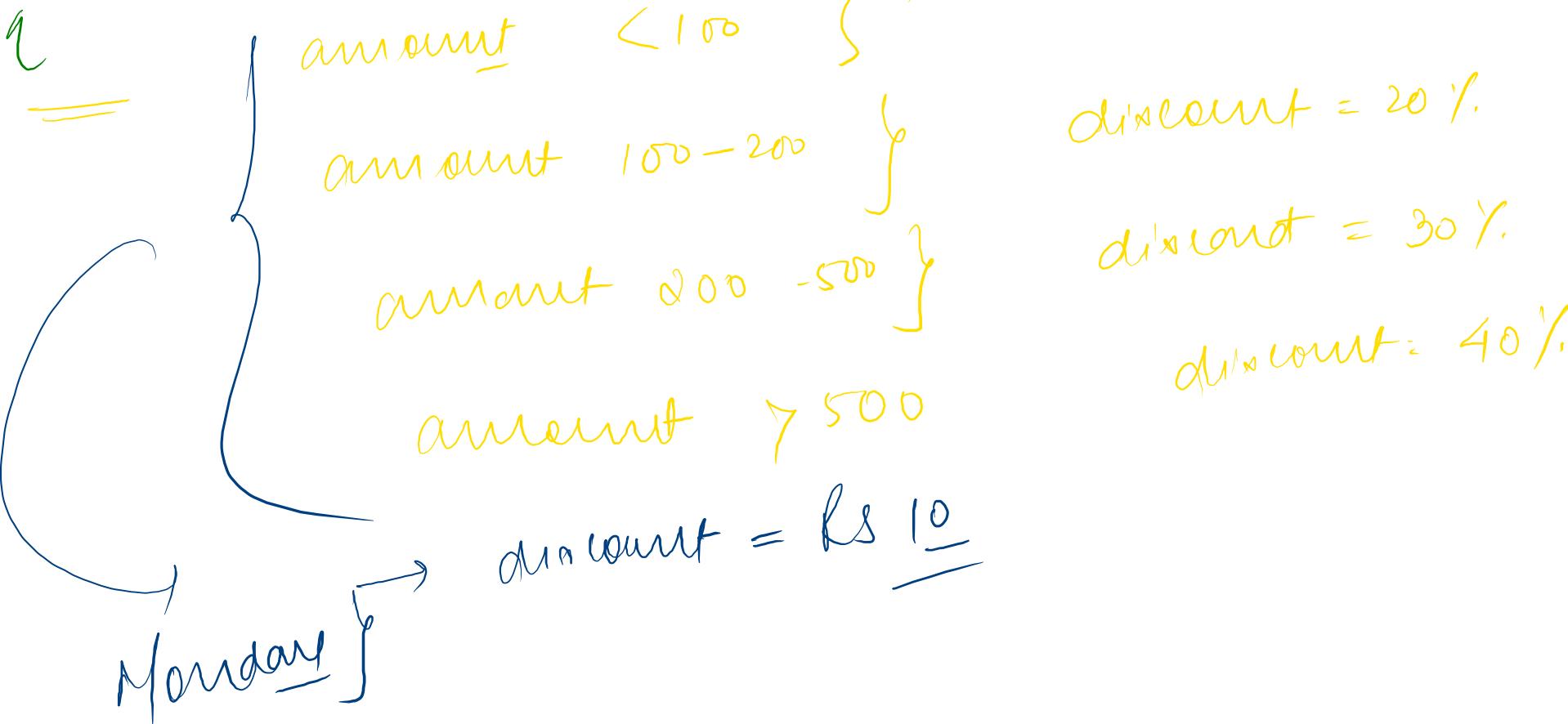
```
var a = 12  
var b = 15  
var c = 11  
// Find the greatest number  
  
if ( a > b){  
    if ( a > c){  
        console.log("a is greatest")  
    }else{  
        console.log("c is greatest")  
    }  
}else{  
    if (b > c){  
        console.log("b is greatest")  
    }else{  
        console.log("c is greatest")  
    }  
}
```

inner

↳ Nested if else block

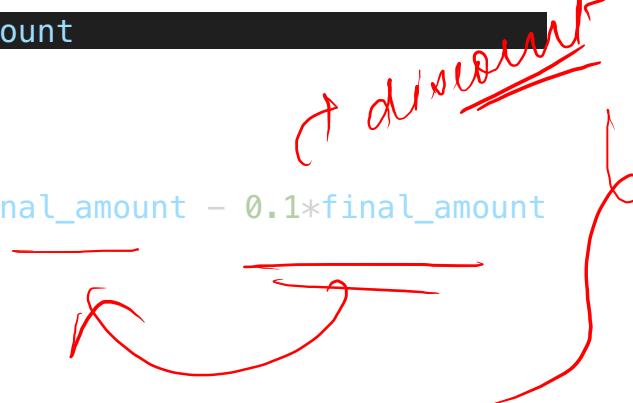
X

$x = 450$ , Mondays, Commute



amount = 450

```
var final_amount = amount  
  
if(amount <=100){  
    /10% discount  
    final_amount = final_amount - 0.1*final_amount  
}  
  
+ discount
```



$\frac{10}{100}$

10% of amount

$$= \frac{10}{100} \times \text{amount}$$

Ten = 0.1

amount = 450

day = "Monday"

Given ↗

// Write the code to get the final price

```
/**  
 * <100 -> 10%  
 * 100-200 -> 20%  
 * 200-500 -> 30%  
 * >500 -> 40%  
 * Monday -> Rs 10  
 */
```

Discount ↗

```
var final_amount = amount  
  
//Discount based on amount  
if(amount <=100){  
    final_amount = final_amount - 0.1*final_amount  
}  
else if(amount > 100 && amount <=200){  
    final_amount = final_amount - 0.2*final_amount  
}  
else if(amount >200 && amount <=500){  
    final_amount = final_amount - 0.3*final_amount  
}  
else{  
    final_amount = final_amount - 0.4*final_amount  
}  
  
//Discount based on the day  
if(day=="Monday"){  
    final_amount = final_amount -10  
}
```

315

305

final\_amount =

$$450 - \frac{0.1}{10} \times 450$$

$$= 450 - 135$$

$$= \underline{\underline{315}} \checkmark$$

✓ 305 ✓

```
amount = 450
```

```
day = "Monday"
```

```
// Write the code to get the final price
```

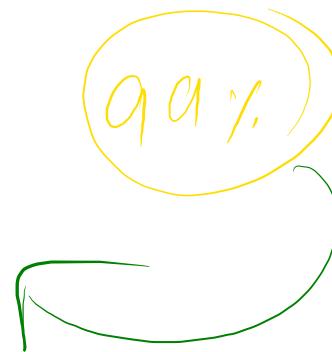
```
/**  
 * <100 -> 10%  
 * 100-200 -> 20%  
 * 200-500 -> 30%  
 * >500 -> 40%  
 * Monday -> Price  
 */
```

```
var final_amount = amount
```

```
//Discount based on amount  
if(amount <=100){  
    //10% discount  
    final_amount = final_amount - 0.1*final_amount  
}else if(amount >100 && amount <=200){  
    final_amount = final_amount - 0.2*final_amount  
}else if(amount >200 && amount <=500){  
    final_amount = final_amount - 0.3*final_amount  
}else{  
    final_amount = final_amount - 0.4*final_amount  
}
```

```
//Discount based on the day  
if(day=="Monday"){  
    final_amount = final_amount -10  
}
```

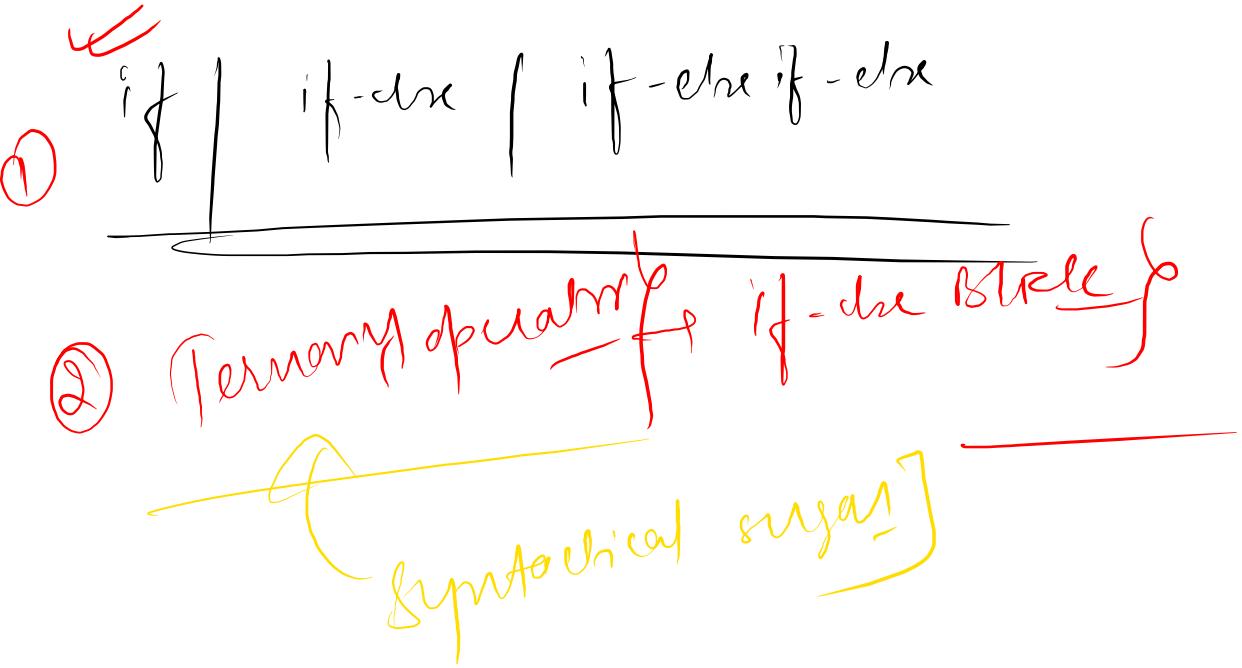
```
console.log("Final price is ", final_amount)
```

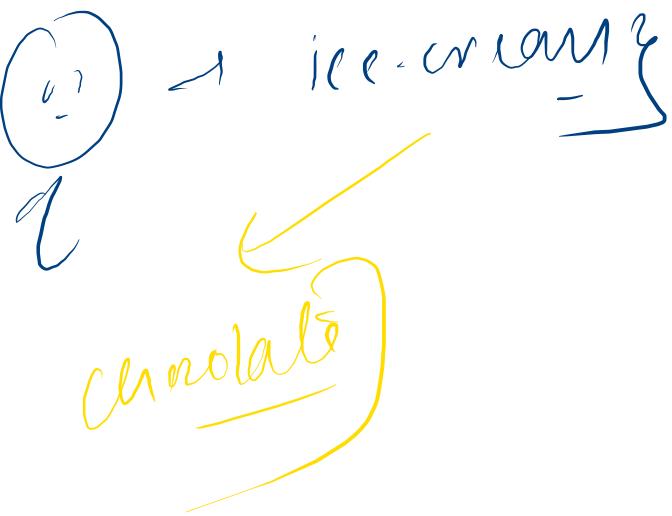


if else)  
{ ternary }

brain  
break  
} ternary }  
}

```
var num = 24  
(num % 2 == 0) ? console.log("Even") : console.log("Odd")
```





conditionals } if - else }

switch statements

Days of weeks }  
↓ { 1, 2, 3 - 7 ↑ saturday ]

switch case  
statements }  
Sunday Monday

~~var day = 7 //~~ I would like to print which day it is

if (exp) Boolean

expression → evaluate to value

```
switch(day){  
    case 0 :  
        console.log("Sunday");  
        break;  
    case 1 :  
        console.log("Monday");  
        break ;  
    case 2 :  
        console.log("Tuesday");  
        break ;  
    case 3 :  
        console.log("Wednesday");  
        break ;  
    case 4 :  
        console.log("Thrusday");  
        break ;  
    case 5 :  
        console.log("Friday");  
        break;  
    case 6 :  
        console.log("Saturday");  
        break;  
    default :  
        console.log("Not a valid number");  
}
```

Thursday ↗

None of the  
case matches ↗

datatypes

undefined

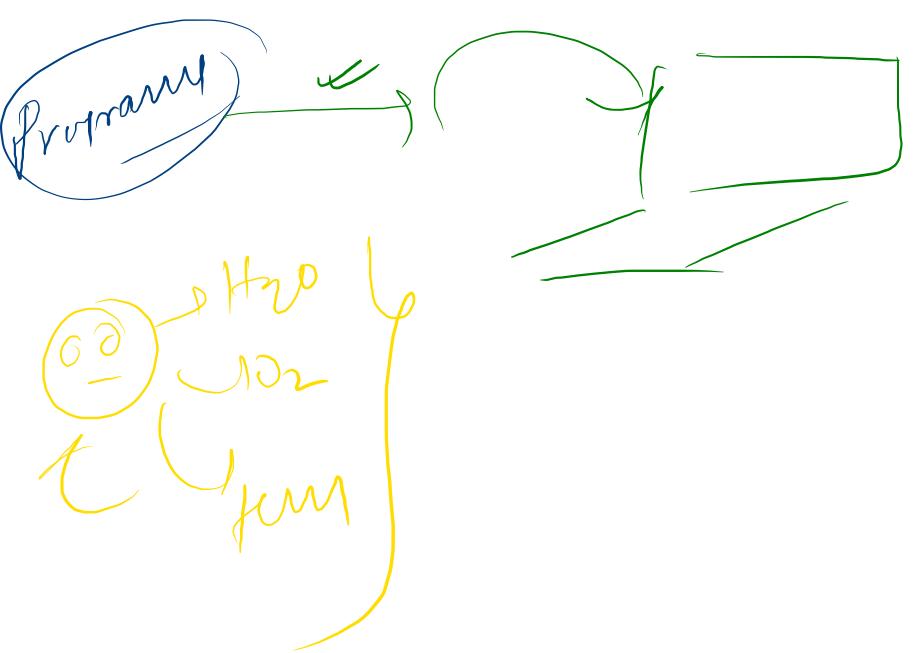
null

No value is assigned

var x

→ undefined





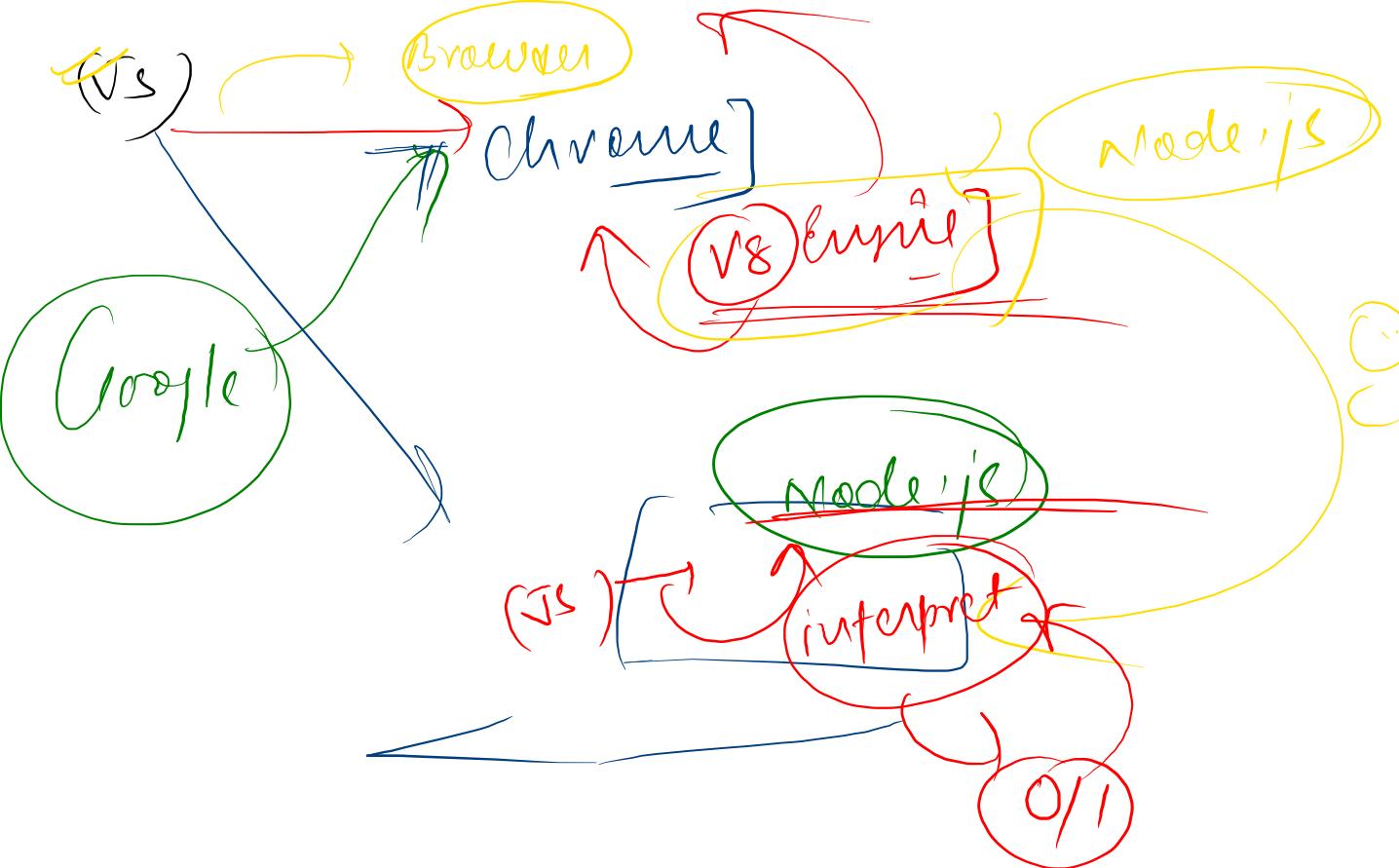
Java → JRE

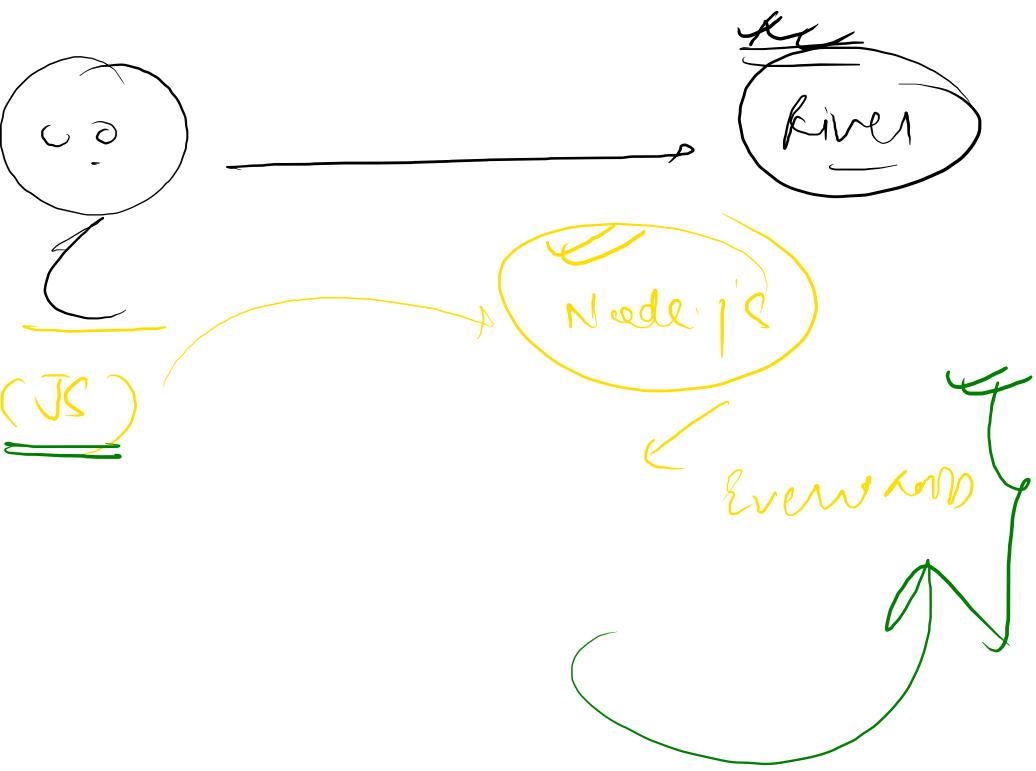
C

C++

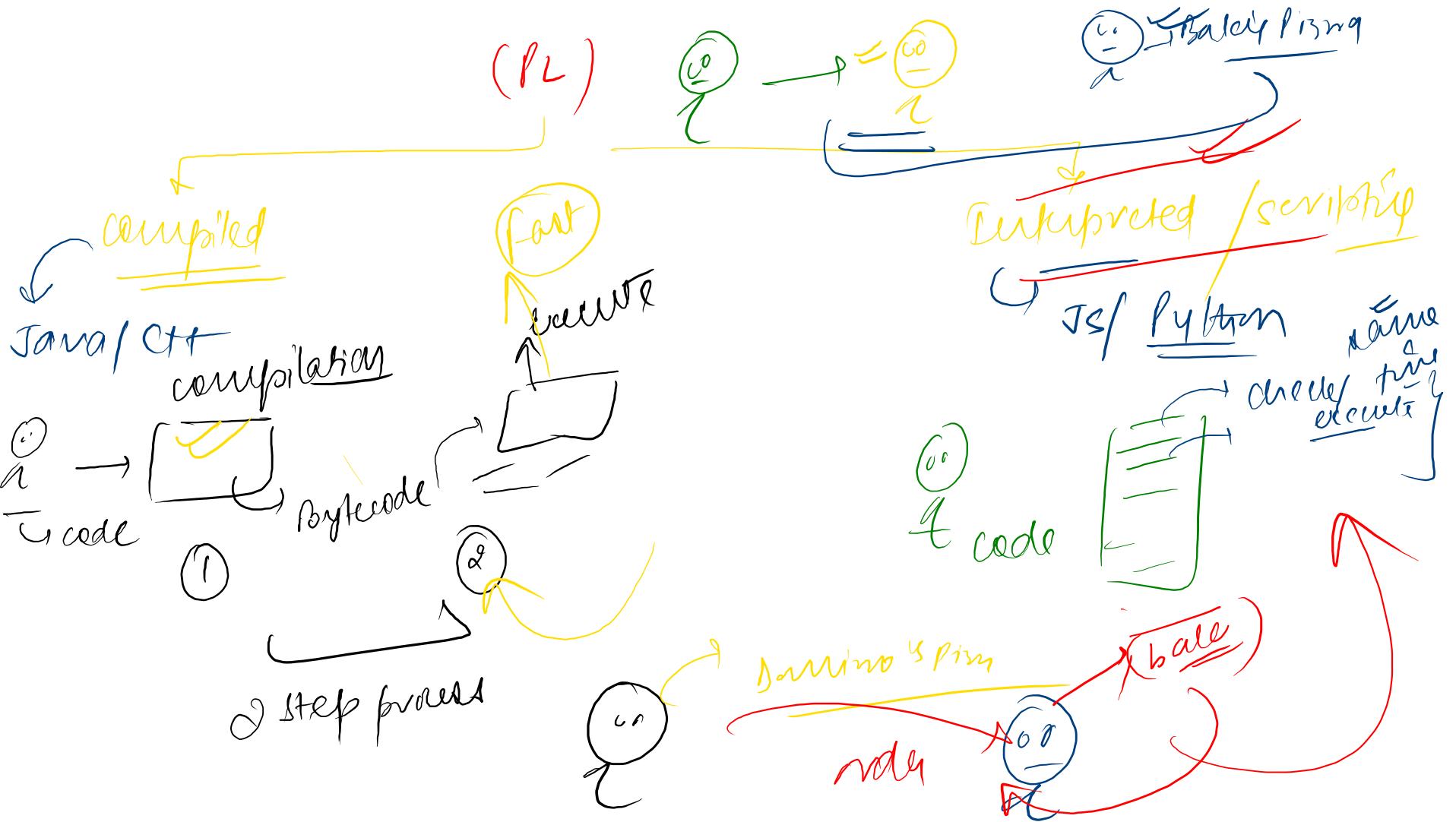
Python

f → KGEa





Compiling / Interpreting ]  
Q [ Difference ] ← interview ]



compilato

fast

Distribuiti / scripty

slow

fixed set of values

if it's a value

more clean

Not so clean

```
var grade = "B"
```

```
switch (grade){  
    case "A":  
        console.log("Excellent");  
        break;  
    case "B":  
        console.log("Average");  
        break;  
    case "C":  
        console.log("Needs Improvement");  
        break;  
    default :  
        console.log("You have bunked exam");  
        break;  
}
```

value match

Boolean expression

```
if(grade == "A"){  
    console.log("Excellent");  
}else if(grade == "B"){  
    console.log("Average");  
}else if(grade == "C"){  
    console.log("Needs Improvement");  
}else{  
    console.log("You have bunked  
classes")  
}
```

condition check for Boolean

co  
z

M Tu W F

→ practice questions)

Recording)

Conditionals

if

if-else

if else if else

Nested

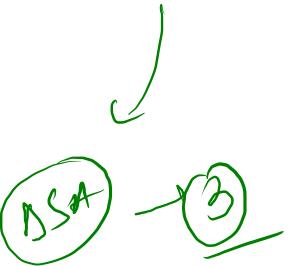
Ternary operators

Switch

Loops

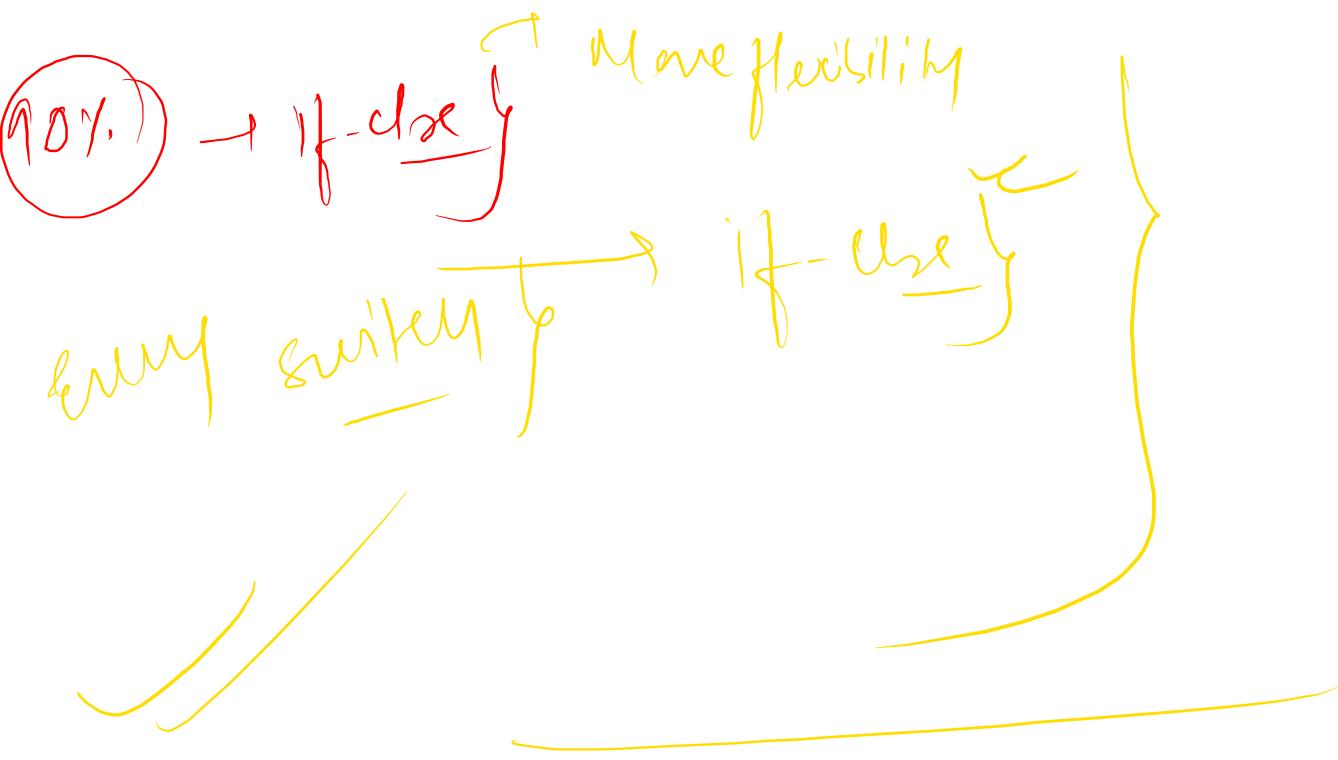
↓  
for|while

↳ Mathieu → (JC) → DSA ↗ [complementary]



DSA → ③

~~4-6 Mantas~~



oo  
→ if  
↓ switch } } → Difference?

amount = 450 €

X uses X

```
if(amount <=100){  
    //10% discount  
    final_amount = final_amount - 0.1*final_amount  
}else if(amount >100 && amount <=200){  
    final_amount = final_amount - 0.2*final_amount  
}else if(amount >200 && amount <=500){  
    final_amount = final_amount - 0.3*final_amount  
}else{  
    final_amount = final_amount - 0.4*final_amount  
}
```

Replace with ternary {