

the Master Course

{C0DENATION}

JAVASCRIPT FUNDAMENTALS

If Else Switch

{ CODENATION }

Learning Objectives

- To understand if/else and switch syntax**
- To understand and use comparison operators**
- To write programs with a single condition**
- To write programs with multiple conditions**

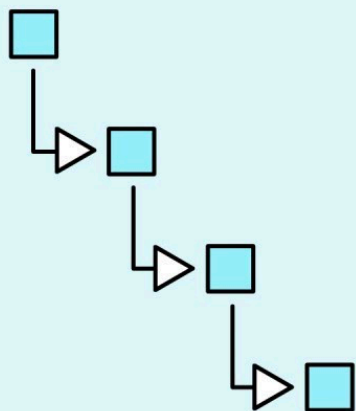
JS

First Things First!

How did your challenges go?

JS

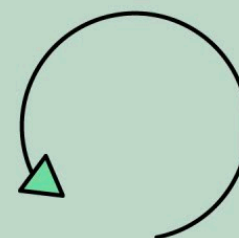
SEQUENCES



SELECTIONS



LOOPS



JS

Imagine...

... you're planning what to wear to go out.

How do you decide?

JS

Stupid question!

...it **depends** on the weather!

If Else If Else

JS

```
let weather = "sunny";

if (weather == "sunny") {
  console.log("Well, I better wear some sunscreen!")
} else if (weather == "rainy") {
  console.log("Better take an umbrella")
} else {
  console.log("Hmmm, it could go either way!")
}
```


JS

```
if (condition1) {  
    //do this  
}  
else if (condition2) {  
    //do this  
}  
else {  
    //if nothing else matched do this  
}
```

Comparison

... does anyone know the difference?

JS

== VS ===

Comparison Operators

JS

== Equal

=== Strict Equal

!= Not Equal

!== Strict Not Equal

Comparison Operators

JS

== Equal

Checks if the values are equal **regardless** of type.

=== Strict Equal

Checks if the values **and** type are equal.

Comparison Operators

JS

!= Not Equal

Checks if the values are not equal **regardless** of type.

!== Strict Not Equal

Checks if the values **and** type are not equal.

More Operators

JS

>=

>

<=

<

%

Try this...

JS

```
if (1 === "1") {  
    console.log(true);  
}  
else {  
    console.log(false);  
}
```

... what happens?

{CODENATION}

Try this...

JS

```
if (1 !== "1") {  
    console.log(true);  
}  
else {  
    console.log(false);  
}
```

... what happens?

Try this...



```
let place = "Manc";  
let weather = "Cloudy";  
  
if (place == "Manc" && weather == "Sunny") {  
  console.log("Check again");  
}  
else if (place == "Manc" && weather == "Rain") {  
  console.log("Obvs");  
}  
else {  
  console.log("What it isn't raining?");  
}
```

... what happens?



JS

Logical Operators

&& and

...**both conditions** have to be met
in order for the code to run.

|| or

...**either condition** can be met in order
for the code to run.

Inside the brackets...

JS

```
(expressionToBeEvaluated  
    logicalOperator &&, ||  
expressionToBeEvaluated)
```

Example

JS

```
let day = "Saturday";  
if (day == "Saturday" || day == "Sunday") {  
  console.log("It's weekend!");  
}  
else {  
  console.log("When's weekend?");  
}
```

Logical Operator

Expression to be evaluated

Expression to be evaluated

{ C0DENATION }



JS

&& and

True and True =
True and False =
False and False =



JS

|| or

True or True =
True or False =
False or False =

JS

Conditional (Teranary) Operators

A **shorthand** if/else statement

Conditional Operator

JS

```
let age = 16;

if (age < 18) {
  console.log('Too young')
} else {
  console.log('Old enough')
}
```

```
let age = 16;
(age < 18) ? console.log('Too young') : console.log('Old enough')
```

Condition

If true

If false

{ CODENATION }

Conditional Operator

JS

```
let age = 16;  
  
let canDrink = (age < 18) ? 'Too young' : 'Old enough'  
  
console.log(canDrink)
```

This would log **'Too young'** to the console

{ CODENATION }

JS

Lets look at...

Switch

Take this in...

JS

```
let car = "Peugeot";

if(car == "Ford" || car == "GM"){
    console.log("You've got an American car!");
}
else if(car == "Peugeot" || car == "Citroen"){
    console.log("You've got a French boy!");
}
else if(car == "Honda" || car == "Toyota" || car == "Suzuki"){
    console.log("Japanese cars are dead quiet!");
}
else if(car == "Mercedes"){
    console.log("You are proper posh German!");
}
else if(car == "Volkswagen"){
    console.log("German aren't that bad at all!");
}
else if(car == "Hyundai" || car == "Kia"){
    console.log("South Korean cars are getting popular!");
}
else{
    console.log("Your car is not in the top ten companies in the world!");
}
```

{ CODENATION }

JS

Switch

... allows us to make this a **lot simpler**.

JS

```
switch(expression){  
  case x:  
    // code here  
    break;  
  case y:  
    // code here  
    break;  
  default:  
    // code here  
}
```

*default is like **else**



Try this

```
let car = "Peugeot";

switch(car){
  case "Ford":
  case "GM":
    console.log("You've got an American car!");
    break;
  case "Peugeot":
  case "Citroen":
    console.log("You've got a French boy!");
    break;
  case "Honda":
  case "Toyota":
  case "Suzuki":
    console.log("Japanese cars are dead quiet!");
    break;
  case "Mercedes":
    console.log("You are proper posh German!");
    break;
  case "Volkswagen":
    console.log("German aren't that bad at all!");
    break;
  case "Hyundai":
  case "Kia":
    console.log("South Korean cars are getting popular!");
    break;
  default:
    console.log("Your car is not in the top ten companies in the world!!");
}
```

JS

Example

JS

```
const grade = 87;

switch (true) {
  case grade >= 70:
    console.log("Distinction");
    break;
  case grade >= 60:
    console.log("Merit");
    break;
  case grade >= 50:
    console.log("Pass");
    break;
  default:
    console.log("Failed");
}
```

Learning Objectives

- To understand if/else and switch syntax**
- To understand and use comparison operators**
- To write programs with a single condition**
- To write programs with multiple conditions**

Activity 1:

Create a **variable** called age. Write an **if statement** that logs "Yes I can serve you" **if** the age is greater than 17 and **else** logs "You aren't old enough".

Stretch

Take your **if statement** and add a variable called country in.

Eg. **if** age > 17 **and** country == "UK".

Activity 2:

Create a variable for any pizza topping.

Create a switch statement, if the topping is one of your favourite ingredients, log to the console "These are important ingredients for my pizza." If you don't mind having Pepperoni for example log to the console "I don't mind having `${topping}` on my pizza.

Finally, for any topping you don't like log "`${topping}` should not be on a pizza."

JS



Activity 3:

Create a variable called password.

Check how many letters are in the password, if there are less than 8, log to the console that the password is too short. Otherwise log the password to the console.

Stretch

Create a variable called num.

Check if the variable is divisible by 3 or 5. If it is, log "This number is divisible by 3 or 5". Otherwise log something else.

Activity 4:

Create a variable called num.

If num is divisible by 3 log "fizz" to the console, if it's divisible by 5 log "buzz" to the console, if it's divisible by both 3 and 5 log "fizz buzz" to the console. Otherwise log num to the console.

Activity 5:

Create a variable called num.

Check if the number is a palindrome (looks the same forward as it does backwards e.g. 1001 or 20202).

JS



Activity 6:

Create a variable called `time`, a variable called `placeOfWork` and a variable called `townOfHome`. Create an if statement that logs to the console where someone is at times of the day. E.g. if the time is 7 I'm at home, at 8 I'm commuting, at 9 I'm at work.

Activity 7:

Take the string
"jrfndklhgfndjkjkgperfijfhdknsadcvjhiiohjfkledsopiuh
gtyujwsdxcvhgfdjhiopiwquhejkdsioifghedjwshi". Find the
index of a last vowel in the string.



Activity 8:

Create a variable called word that takes a string. Create an if statement that checks if the last letter is the same as the first. If it is return true, otherwise return false.

Activity 9:

Create two variables called num1 and num2. Create an if statement that checks if the result of the sum is even. If it is return the number, otherwise return the numbers multiplied together.

For tomorrow...

... take a look at **arrays** and **loops**.

JS

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Loops_and_iteration

Can you name the different types of **loops**?
How do you access an item in an **array**?