the Master Course

{CODENATION}

JAVASCRIPT FUNDAMENTALS

If Else Switch

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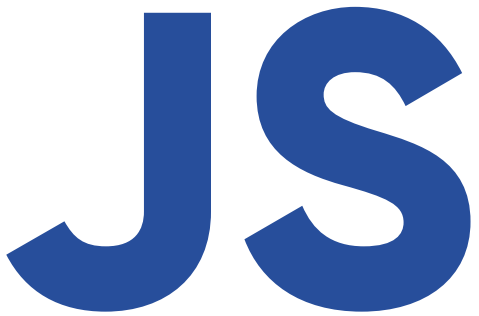
Learning Objectives

To demonstrate use of if/else and switch syntax

To identify and use comparison operators

To write programs with a single condition

To write programs with multiple conditions



First Things First!

How did your challenges go?

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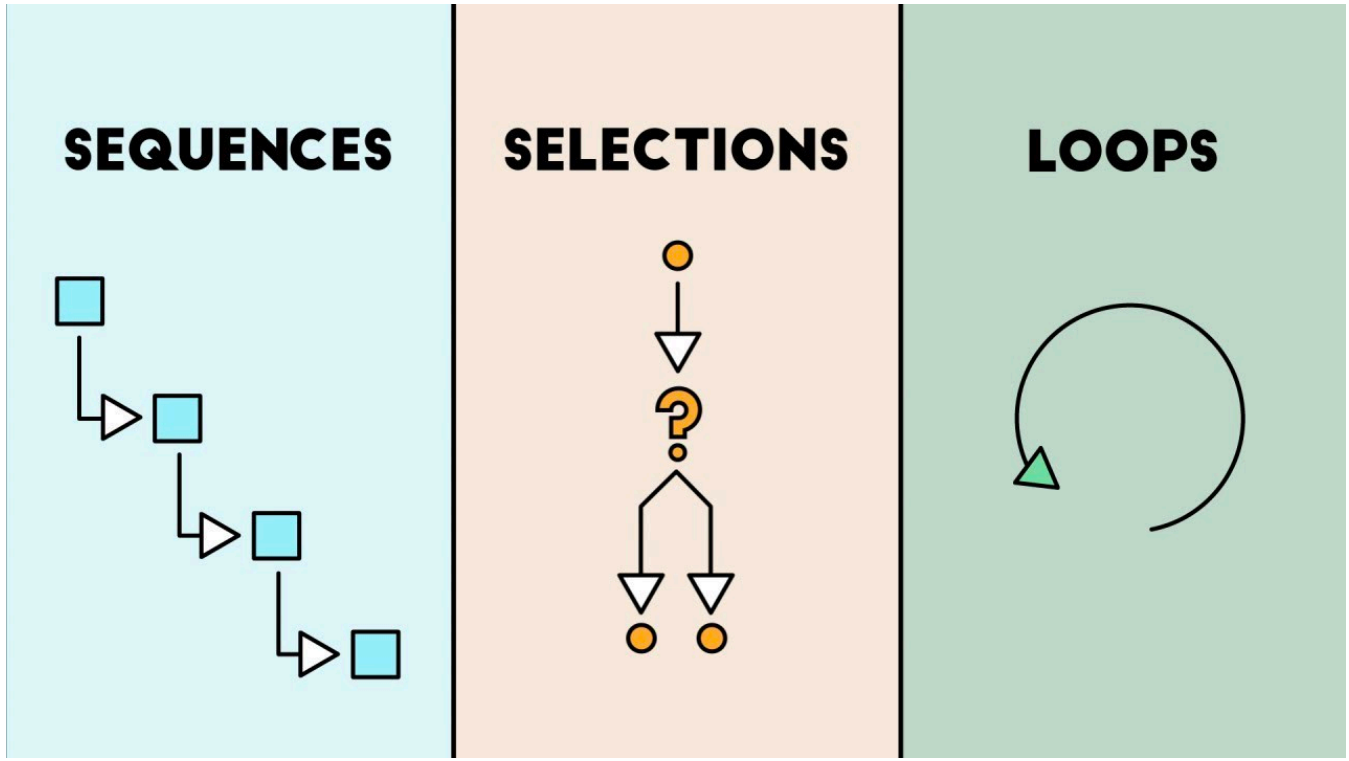
JS



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JS

Imagine...

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

How do you decide?

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JS

Stupid question!

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

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If Else If Else

JS

```
let weather = "sunny";

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

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```
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

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Comparison Operators

JS

== Equal

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

=== Strict Equal

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

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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.

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More Operators

JS

>=

>

<=

<

%

Try this...


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

... what happens?

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Try this...

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

... what happens?

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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?

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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...

```
(expressionToBeEvaluated

  logicalOperator &&,||

expressionToBeEvaluated)
```

Example

```
let day = "Saturday";

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

true or false

Logical Operator

Expression to be evaluated

Expression to be evaluated

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Lets look at...

Switch

Take this in...

```
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!");
}
```

JS

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JS

Switch

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

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

*default is like **else**

JS

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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!!");
}
```

Example

```
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");
}
```

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Learning Objectives

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Activity 1:

JS

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”.

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Activity 2:

Create a variable for any pizza topping.

JS

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.”

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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.

JS

Activity 4:

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.

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Activity 5:

JS

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 6:

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).

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Activity 7:

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 8:

Take the string "jrfndklhgfndjkjlkgperfijfhdknsadcvjhiiohjfkledsopiuh gtyujwsdxcvhgfdjhiopiwquhejkdsoiufghedjwshi". Find the index of a last vowel in the string.

Activity 9:

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 10:

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.

Further Reading

JS

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

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?**

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