

# Nation Code

## JavaScript Fundamentals

What if

{codenation}<sup>®</sup>

# Learning Objectives

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



# What **if**?



**Imagine** there's some **music**  
playing...

How does it make you **feel**?



It **depends** on the music, right?

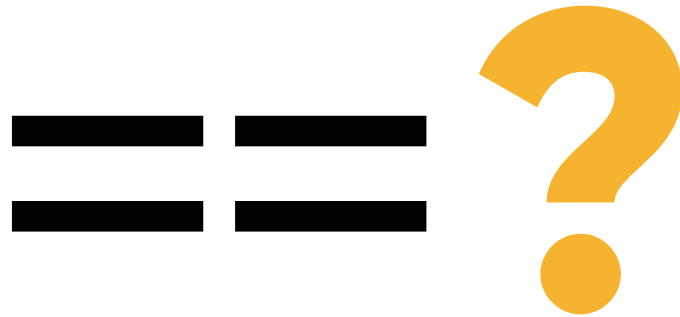
It's **conditional** (just like an **if** statement)

```
let music = "classical";

if (music == "classical") {
    console.log("Oh no it's that classical again");
}
else if (music == "no music") {
    console.log("Arh, peace and quiet");
}
else {
    console.log("Nice and noisy");
}
```

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

```
if (music == myMusic) {  
    console.log("Oh no it's that classical again");  
}
```





# Comparison/Comparitive Operators



**==** Equal

**===** Strict Equal

**!=** Not equal

**!==** Strict not equal



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



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

!=

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

!==

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

> ||  
< ||

>  
<

%

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

# What is logged?

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

# What is logged?



Let's go **further..**

```
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?");  
}
```





Orrrrrrrrrr?

```
let day = "Saturday";

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

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



It's just **logic.**

# And

## &&

**True and True →**

**True and False →**

**False and False →**

# And &&

**True and True → True**

**True and False → False**

**False and False → False**

Or

||

**True and True →**  
**True and False →**  
**False and False →**

Or

||

True and True → True  
True and False → True  
False and False → False





Let's **switch** it up

```
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!");
}
```



A **switch** is made up of **case blocks**, it also has an (optional) **default**

```
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!");
}
```

```
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!!");
}
```

```
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

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# Activity:

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

Create a **variable** called age.

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



# Activity:



Take your if statement and add a variable called country.

Now check if **age > 17** and **country == "UK"**

# Activity on switch case:

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 sausage or onions for example, log to the console "I don't mind having \${topping} on my pizza." Finally, for any toppings you don't like log "\${topping} should not be on a pizza."

## **Challenge 1(if/else):**

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.

## **Challenge 2(use both if/else and switch):**

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" to the console.

Otherwise log "This number is not divisible by 3 or 5".

## Challenge 3:

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.

## Challenge 4:

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).

## Challenge 5:



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.

## Challenge 6:

Take the string  
"jrfndklhgfndjkjkgperfijfhdknsadcvjhiihjkledsopiuh  
gtyujwsdxcvhgfdjhiopiwquhejkdsouiufghedjwshi".  
Find the index of a last vowel in the string.

## Challenge 7:

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.

## Challenge 8:

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.