UNIVERSIDAD NACIONAL DE SAN AGUSTÍN

FACULTAD DE INGENIERÍA DE PRODUCCIÓN Y SERVICIOS

ESCUELA PROFESIONAL DE INGENIERÍA DE SISTEMAS

LABORATORIO DE PROGRAMACIÓN WEB 2

67 ejercicios de JavaScript

DOCENTE:

- Corrales Delgado, Carlo Jose Luis

ESTUDIANTE:

- Camargo Hilachoque Romina Giuliana

AREQUIPA-PERÚ

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JS Variables(5 ejercicios)

Create a variable called `carName`, assign the value `Volvo` to it.

```
let carName = "Volvo";
```

Create a variable called `x`, assign the value `50` to it.

```
let x = 50
```

Display the sum of `5 + 10`, using two variables: `x` and `y`.

```
let x = 5;
let y = 10;
document.getElementById("demo").innerHTML = x + y;
```

Create a variable called `z`, assign `x + y` to it, and display the result in an alert box.

```
let x = 5;
let y = 10;
let z = x + y;
alert(z);
```

On one single line, declare three variables with the following names and values:

```
firstName = "John"
lastName = "Doe"
age = 35
```

```
let firstName = "John", lastName = "Doe", age = 35;
```

JS Operators(5 ejercicios)

Multiply `10` with `5`, and alert the result:

```
alert(10 * 5);
```

Divide `10` by `2`, and alert the result:

```
alert(10 / 2);
```

Alert the **remainder** when `15` is divided by `9`.

```
alert(15 % 9);
```

Use the correct **assignment operator** that will result in `x` being `15` (same as `x = x + y`).

```
x = 10;
y = 5;
x += y;
```

Use the correct **assignment operator** that will result in `x` being `50` (same as `x = x * y`).

```
x = 10;
y = 5;
x *= y;
```

JS Data Types(1 ejercicio)

Use comments to describe the correct data type of the following variables:

```
let length = 16;          // Number
let lastName = "Johnson"; // String
const x = {
  firstName: "John",
  lastName: "Doe"
};                        // Object
```

JS Functions(4 ejercicios)

Execute the function named `myFunction`.

```
function myFunction() {
  alert("Hello World!");
}
myFunction();
```

Create a function called "myFunction".

```
function myFunction() {
  alert("Hello World!");
}
```

Make the function return "Hello".

```
function myFunction() {
  return "Hello";
}
document.getElementById("demo").innerHTML = myFunction();
```

Make the function display "Hello" in the inner HTML of an element with the ID "demo".

```
function myFunction() {
  document.getElementById("demo").innerHTML = "Hello";
}
```

JS Objects(3 ejercicios)

Alert "John" by extracting information from the person object.

```
const person = {
  firstName: "John",
  lastName: "Doe"
};

alert(person.firstName);
```

Add the following property and value to the person object: country: Norway.

```
const person = {
  firstName: "John",
  lastName: "Doe",
  country: "Norway"
};
```

Create an object called person with name = John, age = 50.
Then, access the object to alert("John is 50").

```
const person = {
  name: "John", age: 50
};
alert(person.name + " is " + person.age);
```

JS Events(3 ejercicios)

The <button> element should do something when someone clicks on it. Try to fix it!

```
<button onclick="alert('Hello')">Click me.</button>
```

When the button is clicked, the function "myFunction" should be executed.

```
<button onclick="myFunction()">Click me.</button>
```

The <div> element should turn red when someone moves the mouse over it.

```
<div onmouseover="this.style.backgroundColor='red'">myDIV.</div>
```

JS Strings(3 ejercicios)

Use the length property to alert the length of `txt`.

```
let txt = "Hello World!";
let x = txt.length;
alert(x);
```

Use escape characters to alert `We are "Vikings"`.

```
let txt = "We are \"Vikings\"";
alert(txt);
```

Concatenate the two strings to alert "Hello World!".

```
let str1 = "Hello ";
let str2 = "World!";
alert(str1 + str2);
```

JS String Methods(5 ejercicios)

Convert the text into an UPPERCASE text:

```
let txt = "Hello World!";
txt = txt.toUpperCase();
```

Use the slice method to return the word "bananas".

```
let txt = "I can eat bananas all day";
let x = txt.slice(10 , 17);
```

Use the correct String method to replace the word "Hello" with the word "Welcome".

```
let txt = "Hello World";
txt = txt.replace("Hello", "Welcome");
```

Convert the value of `txt` to upper case.

```
let txt = "Hello World";
txt = txt.toUpperCase();
```

Convert the value of `txt` to lower case.

```
let txt = "Hello World";
txt = txt.toLowerCase();
```

JS Arrays(3 ejercicios)

Get the value "Volvo" from the `cars` array.

```
const cars = ["Saab", "Volvo", "BMW"];
let x = cars[1];
```

Change the first item of cars to "Ford".

```
const cars = ["Volvo", "Jeep", "Mercedes"];
cars[0] = "Ford";
```

Alert the number of items in an array, using the correct Array property.

```
const cars = ["Volvo", "Jeep", "Mercedes"];
alert(cars.length);
```

JS Array Methods(3 ejercicios)

Use the correct Array method to remove the last item of the `fruits` array.

```
const fruits = ["Banana", "Orange", "Apple"];
fruits.pop();
```

Use the correct Array method to add "Kiwi" to the `fruits` array.

```
const fruits = ["Banana", "Orange", "Apple"];
fruits.push("Kiwi");
```

Use the `splice()` method to remove "Orange" and "Apple" from `fruits`.

```
const fruits = ["Banana", "Orange", "Apple", "Kiwi"];
fruits.splice(1, 2);
```

Js Array Sort(1 ejercicio)

Use the correct Array method to sort the `fruits` array alphabetically.

```
const fruits = ["Banana", "Orange", "Apple", "Kiwi"];
fruits.sort();
```

JS Dates(4 ejercicios)

Create a Date object and alert the current date and time.

```
const d = new Date();
alert(d);
```

Use the correct Date method to extract the year (four digits) out of a date object.

```
const d = new Date();
year = d.getFullYear();
```

Use the correct Date method to get the month (0-11) out of a date object.

```
const d = new Date();
month = d.getMonth();
```

Use the correct Date method to set the year of a date object to 2020.

```
const d = new Date();
d.setFullYear(2020);
```

JS Math(4 ejercicios)

Use the correct Math method to create a random number.

```
let r = Math.random();
```

Use the correct Math method to return the largest number of 10 and 20.

```
let x = Math.max(10, 20);
```

Use the correct Math method to round a number to the nearest integer.

```
let x = Math.round(5.3);
```

Use the correct Math method to get the square root of 9.

```
let x = Math.sqrt(9);
```

JS Comparisons(4 ejercicios)

Choose the correct comparison operator to alert `true`, when `x` is greater than `y`.

```
x = 10;
y = 5;
alert(x > y);
```

Choose the correct comparison operator to alert `true`, when `x` is equal to `y`.

```
x = 10;
y = 10;
alert(x == y);
```

Choose the correct comparison operator to alert `true`, when `x` is NOT equal to `y`.

```
x = 10;
y = 5;
alert(x != y);
```

Choose the correct conditional (ternary) operator to alert "Too young" if age is less than 18, otherwise alert "Old enough".

```
var age = n;
var voteable = (age < 18) ? "Too young" : "Old enough";
alert(voteable);
```

JS Conditions(2 ejercicios)

Fix the if statement to alert "Hello World" if `x` is greater than `y`.

```
if (x > y) {
    alert("Hello World");
}
```

Fix the if statement to alert "Hello World" if `x` is greater than `y`, otherwise alert "Goodbye".

```
if (x > y) {
    alert("Hello World");
} else {
    alert("Goodbye");
}
```

JS Switch(2 ejercicios)

Create a `switch` statement that will alert "Hello" if `fruits` is "banana", and "Welcome" if `fruits` is "apple".

```
switch(fruits) {
  case "Banana":
    alert("Hello")
    break;
  case "Apple":
    alert("Welcome")
    break;
}
```

Add a section that will alert("Neither") if `fruits` is neither "banana" nor "apple".

```
switch(fruits) {
  case "Banana":
    alert("Hello")
    break;
  case "Apple":
    alert("Welcome")
    break;
  default:
    alert("Neither");
}
```

JS For Loops(2 ejercicios)

Create a loop that runs from 0 to 9.

```
let i;
for (i = 0; i < 10; i++) {
  console.log(i);
}
```

Create a loop that runs through each item in the `fruits` array.

```
const fruits = ["Apple", "Banana", "Orange"];
for (x of fruits) {
  console.log(x);
}
```

JS While Loops(2 ejercicios)

Create a loop that runs as long as `i` is less than 10.

```
let i = 0;
while (i < 10) {
  console.log(i);
  i++
}
```

Create a loop that runs as long as `i` is less than 10, but increase `i` with 2 each time.

```
let i = 0;
while (i < 10) {
  console.log(i);
  i = i + 2;
}
```

JS Break Loops(2 ejercicios)

Make the loop stop when `i` is 5.

```
for (i = 0; i < 10; i++) {
  console.log(i);
  if (i == 5) {
    break;
  }
}
```

Make the loop jump to the next iteration when `i` is 5.

```
for (i = 0; i < 10; i++) {
  if (i == 5) {
    continue;
  }
  console.log(i);
}
```

JS HTML DOM(9 ejercicios)

Use the `getElementById` method to find the `<p>` element, and change its text to "Hello".

```
<p id="demo"></p>

<script>
document.getElementById("demo").innerHTML = "Hello";
</script>
```

Use the `getElementsByTagName` method to find the *first* `<p>` element, and change its text to "Hello".

```
<p id="demo"></p>

<script>
document.getElementsByTagName("p")[0].innerHTML = "Hello";
</script>
```

Change the text of the first element that has the class name "test".

```
<p class="test"></p>
<p class="test"></p>

<script>
document.getElementsByClassName("test")[0].innerHTML = "Hello";
</script>
```

Use HTML DOM to change the value of the image's src attribute.

```
<img id="image" src="smiley.gif">

<script>
document.getElementById("image").src = "pic_mountain.jpg";
</script>
```

Use HTML DOM to change the value of the input field.

```
<input type="text" id="myText" value="Hello">

<script>
document.getElementById("myText").value = "Have a nice day!";
</script>
```

Change the text color of the <p> element to "red".

```
<p id="demo"></p>

<script>
document.getElementById("demo").style.color = "red";
</script>
```

Change the font size of the p element to 40 pixels.

```
<p id="demo"></p>

<script>
document.getElementById("demo").style.fontSize = "40px";
</script>
```

Use the CSS display property to hide the p element.

```
<p id="demo"></p>

<script>
document.getElementById("demo").style.display = "none";
</script>
```

Use the eventListener to assign an onclick event to the <button> element.

```
<button id="demo">Click me1</button>

<script>
document.getElementById("demo").addEventListener("click", myFunction);
</script>
```