PRESENTATION A

Find out about the versions of Javascript that exist and mention what important changes there are.

There are 9 versions: ES1, ES2, ES3, ES4 Abandoned, ES5, ES6, ES7, ES8, ES9.

The ES was implemented by the ECMA (European Computer Manufacturers Association) to carve out a standard, ES (ECMAScript)

And each iteration of ES provides either more functionality for developers or updates to ease coding. One thing to take in account when these changes happen is that some browsers may find problems or websites stopping functioning all together if they update to a new ES.

What are the rules to follow when naming a variable in Javascript?

- Variable names cannot contain spaces.

- Variable names can only contain:
  - Letters
  - Numbers
  - Underscores
  - or dollar signs.

- Variable names must begin with:

  a letter,

  an underscore (_),

  or a dollar sign ($).

- Variable names are case-sensitive.

```
var myVar1 = 1;
var myVar_$_22 = 3;

var _ = "dash";
var _temp = "some value";

var $1 = 30;
var $ = 30;
```

can’t start with a number

```
var 3name = 4;
```

What does the term case sensitive mean?

It means when the compiler/computer is reading your code it will know the difference when the same character is lower or uppercase, i.e. carlos and Carlos will be different variables because of C/c being uppercase or lowercase.

What is camel case?

Camel Case is a programing best practices among many languages so that your code is more readable.

Like its namesake Camel the name structure is meant to begin with a lowercase letter and when it’s a new word to change to uppercase.

i.e. javaFunction(a,b);

function camelHumpCamel();

What are the reserved keywords in Javascript? Find 10 typical reserved keywords and explain their use

- delete - removing properties from an object
- break - exits a function
- case - enables logical expressions that are to be matched or not
- if - enables logical expressions
- catch - used in combination with try for error message catching
- new - used among declaration of objects
- import - used to call upon other files or libraries
- true - a boolean statement
- switch - refers to a type of logical expressions that use case
- function - the “blocks” of programing

Write 3 variable names that are invalid in JavaScript

let 1_var = 1;

let 1+1;

let namu_ = “RAUL”;

Write 3 variable names that are valid in JavaScript

let name = “La rata alada”;

let num = 2;

let rataAlada = true;

What is a function? Search for a simple example of creating a function in the following programming languages and explain the main differences

- **Javascript**

Function are the “blocks” of coding, organizing it and used to perform a particular task.

```
function sumAB (a, b) {
    var result = a+b;
    }
```

What is a function? Search for a simple example of creating a function in the following programming languages and explain the main differences

- C#

```
public int MyAge()
{
return 53;
}
```

Function type needs to be declared, in this case the function it INT because it return a number value.

What is a function? Search for a simple example of creating a function in the following programming languages and explain the main differences

- Java

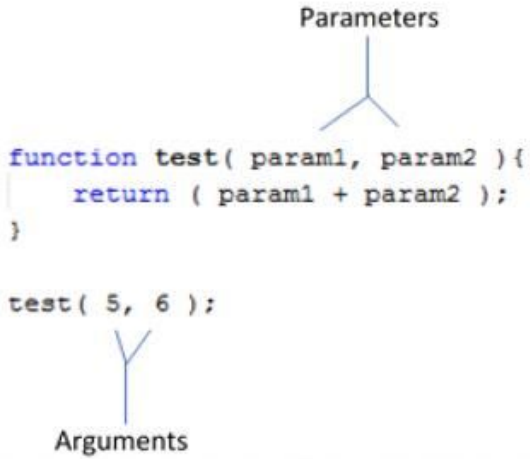
```
public String MyAge()
{
return “La Rata Alada”;
}
```

Function type needs to be declared, in this case the function it String because it returns a the string of character “La Rata Alada”.

What are the parameters of a function? And the arguments? Explain the difference and show an example

The parameters are the named variables passed into a function. Function arguments are the real values passed to the function.

Parameters are initialized to the values of the arguments supplied.



What are auto global variables in Javascript? Show an example

When a variable is not defined and is given a value JavaScript will make it a global variable, making it accessible from everywhere in the code.

```
function example (a, b) {
    result = a+b;
}
```

i.e. Result not being defined becomes automatically a global variable.

What is a code comment? Give an example of each of the different ways to comment in each of the following languages

- Javascript
- C#
- Java

A code comment is the backbone for you to understand your own code because in the future you will no longer remember where the variable “name” is in those 10M lines of code. Also helpful for your colleagues to understand, what is where and what does what.

// or /* whatever inside is commented */

What is the return keyword used for? Is it possible to store the result of a function within a variable? Show an example

Return is used with a function to provide its result.

It is possible to store the result of a function:

function sumAB(a,b){ var sum = a + b; return sum}

var total = sumAB(a,b);

What is the else if structure? Explain each part of the else if structure and show two examples

If Else, can be used for logical operations. IF is the first part and the main structure of the operation, here you define in what ways your operation continues, i.e. if(a > b) the operation continues if a’s value is larger then b’s. ELSE is the second part and is used in counter part to IF, i.e. if(a > b) {} else {a ++;} the operation goes into a++ if a’s value is not larger then b’s.

What are iterators? Give an example of each of the iterator types in each of the following languages:

- Javascript
- C#
- Java

Iterators are used to loop through arrays, list, etc.

All 3 languages have `for(let i = 0; i <= 10; i++){` in which the “i” is your iterator that goes along 10 loops.

What is the difference between the while and the for in iterators?

They may both be loops but FOR statement has a finite number of loops it’s supposed to do, in WHILE it will loop until its condition is met.

What happens when a switch does not have a break in the specific “case“ that is executed?

Use the switch statement to select one of many code blocks to be executed. When JavaScript reaches the break keyword, it breaks out of the switch block. This will stop the execution inside the switch block.

If you omit the break statement, the next case will be executed even if the evaluation does not match the case.

Name several sources where you would look for information about how Javascript works internally

Google is amazing for information.

JavaScript API is also a good source to know its library of elements and methods.

Develop three simple functions in JavaScript

Write a function that compares all the numbers in an array of numbers and returns the largest number.

Array: [1, 4, 5, 65, 77, 88, 90, 23, 34, 56, 68, 44, 21,13]

```
const comparaNum = ()=>{
    const num_array = [ 1, 4, 5, 65, 77, 88, 90, 23, 34, 56, 68, 44, 21,13 ];
    let numero_max = 0;
        num_array.forEach(num_array => {
         if(numero_max < num_array){
             numero_max = num_array
         }    }
    )
    return console.log(numero_max);
}
comparaNum();
```

Write a function that compares all the numbers in an array of numbers and returns only odd numbers that are less than the value of the parameter that the function must receive.

Array: [1, 4, 5, 65, 77, 88, 90, 23, 34, 56, 65, 44, 21,13]

```
const comparaNum = (num)=>{
    const num_array = [ 1, 4, 5, 65, 77, 88, 90, 23, 34, 56, 68, 44, 21,13 ];
    let odd_array = [];
    num_array.forEach(num_array => {
        if(num_array % 2 == 0 && num_array <= num){
            odd_array.push(num_array);
        }
    }
    )
    return console.log(odd_array);
}
comparaNum(120)
```

Write a function that returns the first half of any array regardless of its length. You can use the following arrays to test your function:

Array: ["January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", "December"];

```
const half_array = ()=>{
    const monthArray = ["January", "February", "March", "April", "May", "June", "July", "August",
"September", "October", "November", "December"];
    let midArray = [];
    for (let i = 0; i < monthArray.length / 2; i++) {
        midArray.push(monthArray[i]);
    }
    return console.log(midArray);
}
half_array();
```