JAVASCRIPT ACTIVITIES

ACT 01 : JAVASCRIPT - Beginning with JavaScript.
a) Write a script that shows your name and age in a HTML web page. You must use the object document and the function write in order to print them.

NOTE! Notice that we want show every data in a different row so we must use the HTML tag
 such as : document.write('
').

ACT 02 : JAVASCRIPT - Variables.
a) Write a script that defines and sets two variables, one string variable that stores the name of a worker and one real variable that stores his or her salary. Print every data in a different line.

ACT 03 : JAVASCRIPT - Entering Data.
a) Write a script that allows us to enter the user name and his/her email using the keyboard. After all print every data in the web page.

ACT 04 : JAVASCRIPT - Sequential Structure.
Write a script that allow us to ...

a) Enter the side length of a square, and print its perimeter.

b) Enter four numbers, and print the addition and the product of them.

c) Enter the price and quantity of two products, and print the bill.

d) Enter the base and the height of a triangle, and print its area.

ACT 05 : JAVASCRIPT - IF Simple Conditional Structure.
Write a script that allow us to ...

a) Enter the name and three marks of a student, if the average is bigger than or equal to 5 then the message "Congratulations! You pass the exam" must appear.

b) Enter an email twice, and print the message "Emails are different!" if they are not equal.

c) Enter the age of a person, if the person is an adult (older than or equal to 18) and is not retired (less than 65) then the message "You are in working age." must appear.

d) Enter an integer number, if the number is pair then the message "Pair number!" must appear.

ACT 06 : JAVASCRIPT - IF/ELSE Complex Conditional Structure.
Write a script that allow us to ...

a) Enter two numbers N1 and N2, if the first one is bigger than the second one then it prints the addition N1+N2, otherwise it prints the difference N2-N1.

b) Enter three marks of a student, if the average is higher or equal to 5 then a message "You pass!" must appear, otherwise a message "You fail!" must be shown.

c) Enter an integer number, and if the number is pair then the message "Pair Number" must appear, otherwise the message "Odd Number" must appear.

d) Enter the age of a person, and if the age is between 18 and 65 then the message "Working Age" must appear, otherwise the message "Not Working Age" must appear.

ACT 07 : JAVASCRIPT - IF/ELSE IF Nested Conditional Structure.
Write a script that allow us to ...

a) Enter three different numbers and print the biggest one (maximum).

b) Enter three different numbers and print the smallest one (minimum).

c) Enter an integer number between (0 and 999), and print a message informing about how many digits it has (1, 2 or 3).

d) Enter an integer number and print the message "Positive Number", "Negative Number" or "Zero" in every case.

ACT 08 : JAVASCRIPT - Logical Operators in Conditional Structures.
Write a script that allow us to ...

a) Enter a date, and print a message "Today is Christmas" if the date is this year's Christmas. (Date must be entered in parts: day, month and year).

b) Enter three different numbers and if all of them are less than 10 print the message "All the numbers are less than 10".

c) Enter two numbers representing a coordinate point (x, y) and then print a message informing about where the point is placed:

"First Quadrant" if $x > 0$ and $y > 0$.
"Second Quadrant" if $x < 0$ and $y > 0$.
"Third Quadrant" if $x < 0$ and $y < 0$.
"Fourth Quadrant" if $x > 0$ and $y < 0$.
d) Enter two numbers representing the worker's salary and years in the company, calculate and print the salary of the next year according to the following conditions:

If the salary is less than 500€ and the years are more or equal to 10 then the salary increment is 20%.
If the salary is less than 500€ but the years are less than 10 then the salary increment is 5%.
If the salary is bigger or equal to 500€ then there is no salary increment.
e) Enter three different numbers and if at least one of them is less than 10 print the message "Some numbers are less than 10".

ACT 09 : JAVASCRIPT - SWITCH Conditional Structure.
Write a script that allow us to ...

a) Enter one of the following words (house, table, dog, cat) and then print the translation into Spanish or Catalan.

b) Enter a number and then print the corresponding month (1: January, 2: February, ... 12: December).

c) Enter a number and then print the number of days of the corresponding month (January: 31, February: 28, ... December: 31).

d) Enter a letter and then print "Vowel" or "Consonant" depending on the entered letter.

ACT 10 : JAVASCRIPT - WHILE Repetitive Structure.
Write a script that allow us to ...

a) Print the numbers from 1 to 50. Then print the numbers from 50 to 1. And finally print the numbers from -50 to 0.

b) Print the pair numbers from 2 to 100 (2, 4, 6, ...98, 100).

c) Print 25 numbers in the series 11, 22, 33, 44...

d) Print the 7 multiples from 7 to 70 (7, 14, 21, ..., 63, 70).

e) Enter 10 students' marks and then print how many students have passed and how many students have failed.

f) Enter 5 people heights and then print the average height.

g) Enter 5 workers' salaries in a company, and then print how many workers' salaries are between 500€ and 1000€, how many workers' salaries are bigger than 1000€ and the sum of all the salaries.

h) Enter 2 lists of 3 numbers every one, and print what list has a bigger sum. You can use two or more nested repetitive structures.

i) Enter 5 numbers and then print how many numbers are pair and how many numbers are odd. Use the operator %.

ACT 11 : JAVASCRIPT - DO/WHILE Repetitive Structure.
Write a script that allow us to ...

a) Enter positive and negative numbers until we enter the number 9999, sum all of them, print the value and print the message:

"ZERO" if the value of the sum is zero.
"POSITIVE" if the value of the sum is positive.
"NEGATIVE" if the value of the sum is negative.
b) Enter people information: id number, age and sex (male/female) until we enter the number 0 as ID number, and then print the following information:

How many people are there?
How many men are there? How many women are there?
How many men are between 18 and 65 years old?
What is the name of the oldest woman?
What is the ID number of the youngest man?
c) Enter bank accounts information: account number, client name and money. Calculate the sum of all the bank accounts. For each account information print the following message:

"{CLIENT NAME} is the owner of {ACCOUNT NUMBER} account with {MONEY} €."

ACT 12 : JAVASCRIPT - FOR Repetitive Structure.
Write a script that allow us to ...

a) Enter the base B and height H of 3 triangles. For each triangle it must calculate and print its area A= B*H/2 and how many triangles have an are bigger than 12. :

b) Enter 10 numbers and print the sum of the last 5 numbers.

c) Print the 5 multiplication table (from 5 to 50).

d) Enter a number N and print its multiplication table (from N to N*10).

e) Enter the sides of 4 triangles, and inform about:

For each triangle, what kind of triangle : equilateral (three equal sides), isosceles (two equal sides) or scalene (all different sides).
How many triangles for each kind.
What kind of triangle there are more of them?
f) Enter 10 numbers and print ...

How many positive numbers are there?
How many negative numbers are there?
How many odd numbers are there?
What is the sum of the pair numbers?
g) Enter the marks of students of three different classes (class A : 5 students, class B: 6 students, class C: 11 students) and print ...

The average of the marks for every class.
What is the class with the best average?

ACT 13 : JAVASCRIPT - Functions.
Write a function that ...

a) Receives three numbers and returns the minimum.

b) Receives three numbers and prints them orderly ascendent.

c) Receives the side of a square and returns its perimeter.

d) Receives a number and returns how many digits it has.

e) Receives three numbers and returns the average.

f) Let us enter five numbers and return the sum.

ACT 14 : JAVASCRIPT - Object Oriented Programming (OOP).
Write a script that allow us to ...

a) Create a class called Addition with 2 attributes (valeu1 and value2) and three methods (loadValue1, loadValue2 and result). Try this class to do some additions.

b) Create a class called Person (name and age), a class called Company (name and top age workers). Write a script to create 2 workers and 1 company. Show how many people are able to work in this company.

ACT 15 : JAVASCRIPT - DATE Class.
Write a script that allow us to ...

a) Show the recent term (1st, 2nd, 3rd or 4th).

ACT 16 : JAVASCRIPT - ARRAY Class.
Write a script that allow us to ...

a) Create an 8 elements vector and introduce 8 numbers. Finally it must print:

Total sum of the 8 numbers.
Average of the 8 numbers.
Total sum of the elements higher than 5.
How many numbers are higher than 5.

b) Enter a number N in order to create a N-sized vector, then enter 2 numbers and place them in the first two positions in the vector. Finally fill every K position in the vector with the values of positions K-1 and K-2. Finally print the content of the vector and its total sum.

ACT 17 : JAVASCRIPT - MATH Class.
Write a script that allow us to ...

a) Enter a number N and then print its 3 power.

b) Enter number N and the print its squared root.

ACT 18 : JAVASCRIPT - STRING Class.
Write a script that allow us to ...

a) Enter a series of names until you type "end". Then it must print how many names were typed.

b) Search a string into a longer string. We can type a long text and a word to search in it. Then it must print the position or a message if the word isn't in the text.

c) Enter a word and print a message if the word is a palindrome.

d) Enter an email and check if the symbol @ is in the text.

e) Enter a word, and then:

Print its first half part.
Print the last char.
Print it in reverse order.
Print every char separated by a white space.
Print how many vowels are in the word.
f) Enter a phrase, and the print every word in a different line.

ACT 19 : JAVASCRIPT - Forms & Events.

Write a script that allow us to ...

a) Press on three different buttons, every button labelled with numbers 1, 2 and 3 respectively. When we press on a button a message alert must show the pressed number.

ACT 20 : JAVASCRIPT - FORM, BUTTON & TEXT Elements.
Write a script that allow us to ...

a) Enter a number in a text field and when we press a button an alert message shows the square of this number.

b) Enter two numbers in 2 text fields and when we press a button an alert message shows the biggest one.

c) Enter a name and a surname in 2 text fields, and when we press a button an alert message shows a text with concatenated name and surname.

ACT 21 : JAVASCRIPT - PASSWORD Element.
Write a script that allow us to ...

a) Enter a password into 2 PASSWORD fields, and then when you press a check button an alert message must appear. This message should inform us if the passwords are equal or not.

ACT 22 : JAVASCRIPT - SELECT Element.
Write a script/web that allow us to ...

a) Select from different kinf of pizzas (Pepperoni 6€, Quatro Formaggi 5€, Procciuto 4€,...) using a SELECT element and when one option is selected write its price inside a TEXT element.

b) Generate a cost estimation for a computer using 3 different SELECT elements which allow us to select :

Processor (Intel I3 - $400, Intel I5 $600, Intel I7 $800).
Monitor (Samsung 20' - $250, Samsung 22' - $350, Samsung 26' - $550)
Hard Disk (500 Gb - $300, 1 Tb - $440, 3 Tb - $500)

When we press the button Calculate the final cost is shown in a TEXT element.

c) Select from different kinf of pizzas (Pepperoni 6€, Quatro Formaggi 5€, Procciuto 4€,...) using a SELECT element and enter how many pizzas we want in a TEXT element.
When we press the button Calculate the final cost is shown in another TEXT element.

d) Generate an exam with 4 questions. Every question has 4 possible options and only one of them is right. Use a SELECT element for each question. There must be a button to calculate the final mark of the exam and show an alert message with the final mark.

ACT 23 : JAVASCRIPT - CHECKBOX Element.
Write a script that allow us to ...

a) Check three different checkbox elements (Football, Tennis, and Karate). Finally when we press a button an alert message must appear showing the selected sports.

ACT 24 : JAVASCRIPT - RADIO Element.
Write a script that allow us to ...

a) Select from two RADIO elements: 1) Older than 18, or 2) Younger than 18. Finally when we press a button an alert message must appear informing about if we can enter to the site or not.

ACT 25 : JAVASCRIPT - TEXTAREA Element.
Write a script that allow us to ...

a) Enter a user name, email and comments (TEXTAREA) for a visit book. Then use an alert message to show the introduced data.

ACT 26 : JAVASCRIPT - onFocus & onBlur Events.
Write a script that allow us to ...

a) Enter a username and password and then show an alert message if the password is shorter than 7 characters or longer than 20 characters.

ACT 27 : JAVASCRIPT - onMouseOver & onMouseOut Events.
Write a script that allow us to ...

a) Highlight the row of a table when the mouse cursor is over.

ACT 28 : JAVASCRIPT - onLoad Event.
Write a script that allow us to ...

a) Show an alert message immediately after the page is loaded.

ACT 29 : JAVASCRIPT - WINDOW Object.
Write a script that allow us to ...

a) Press a button and then open a window with width = 600 pixels and height = 300 pixels. This new window must have a button to close itself.

ACT 30 : JAVASCRIPT - WINDOW Object Properties: location, history, screen.
Write a script that allow us to ...

a) When you click on an hyper-link, a random value between 0 and 2 is generated. If the new value is 0 then you must load Google web page, if the value is 1 then you must load the Yahoo web page and if the value is 2 then you must load Bing web page. In order to generate a random value you can use the Math object.

b) When you press a button a pop-up window appears. This window must have the monitor full width and the monitor half height.

c) Show an alert message showing if the browser has enabled or disabled cookies.