PHP Exercises - Block 2

Initialize the values of the variables that are needed with a bounded random value taking into account the statement.

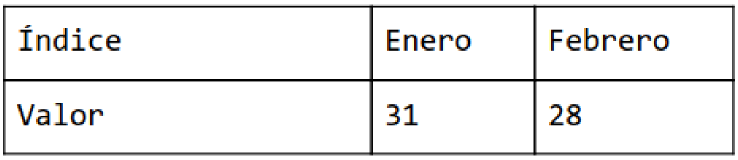
1. Write the necessary code to create two arrays: the first 10 natural numbers (starting with 0) are stored in the first array. In the second, we store the value of the factorial of the number included in the same position of the first array.

2. Create a function that receives two numbers as parameters and creates an HTML table that has as many rows as indicated by the first number and as many columns as indicated by the second parameter.

3. Create an array of 20 random numbers, order them from smallest to largest and indicate:
    - the smallest of the numbers in blue color
    - the largest of the numbers in green color
    - the summatory and the mean (number with two decimal places) of all the numbers.

4. Given a string made up of any 5 words (for example $str = "apple pear lemon watermelon melon"), transform it into an associative array that has the word as its key and its length as its value.

5. Create an array with the months of the year, and for each month the number of days this month will have.



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6. Stores in an array the names of the people whose birthdays are in a given month (for each month of the year). Create a function to add a name to a month. This function must also return in a parameter the number of people who are registered.
   January: Mikel, Ainara, Xabi

   February: Irati, Ibai

   March: Haiza

   …

Loop through the array and display each name separately. Show the names of the months in another color (you can also show the result in a table). Example:

January

Michael

Ainara

xabi

7. Write a function to calculate powers. It receives as arguments the base and the exponent, which is optional and defaults to 2 (square).

8. Create a function that checks for the existence of a config.php file. You should throw an exception if it doesn't exist.

9. Create a function that, given a side, calculates the area of a square. You will need to throw an exception in case the side is a negative number.
   Create an array with five random numbers (make sure the array contains a negative number) and run the function on each element of the array.

10. Create a person class with the attributes dni, first name and last name. Create the corresponding read and write methods for the attributes. Create a method that returns the full name of the person "Person: firstname lastname". Also create a constructor method that receives the three attributes as arguments.

    Create a User class that inherits from Person and add a points attribute. It includes the getPuntos and setPuntos methods and overrides the method that returns the full name of the person: "User: firstname lastname".

    Add a method that indicates a message if the user has less than 100 points.

OOP style

Review the exercises number 6, 7, 8 and 9 to use OOP. You should create at least one class for each exercise, and write your test code outside of this class.

6. Create a Birthday class with an attribute to store the information. Write a constructor with no arguments. Create a function to add a name to a month and another one to return a string with all the information of the array.

7. Create a class to calculate powers. The constructor receives as arguments the base and the exponent, which is optional and defaults to 2 (square). Write a function that calculates and returns the power.

8. Create a class that checks for the existence of a config.php file. The constructor takes the name of the file. Write a function that returns true if the file exists and throws an exception if it doesn't.

9. Create a Square class that stores the side of a square. The constructor throws an exception in case the side is a negative number. Write a getArea() function that calculates and returns the area of the square.
Create an array with five random numbers (make sure the array contains a negative number) and create 5 Square objects and call the getArea() function on each element of the array.