

Lab Week 10: Web Programming (CSci 130) - Department of Computer Science – Fresno State

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Lab (Tuesday 10/24/2017)

Keep the different documents that you are creating during the lab sessions as they can be asked later as a part of the “attendance and participation” mark.

Goals: The goal of this lab is to get familiar with the syntax in PHP by implementing some classic functions. In addition, because you should not reinvent the wheel, you have to be able to investigate into the PHP manual to find out how to use existing functions.

Part 1.

In this exercise, you have to reuse the JSON file : superheroes.json and the HTML file: load_jsonfile.html that were provided on blackboard (JSON session). You have to update the code so you may read a file with AJAX (i.e. using the XMLHttpRequest Object) and therefore read the file from the server.

You may update the code so you can select how you want to open the JSON file (i.e. locally or on the server).

Part 2.

- Create a function in PHP that allows to do the “binary search” in a sorted array
 - create an array with random numbers with the function rand
 - sort the array using the function array_multisort
 - use binary search on the sorted array to validate the approach
- Create a function in PHP that allows to compute the series of Fibonacci.
 - Display the 20 first numbers in a web page.
- Create a function in PHP that allows to find all the prime numbers in an array of int that is given as an input.
 - Display the prime numbers in a web page. (You can use the function to create an array with random numbers)

Part 3.

You have to create 3 classes:

- Person with the properties first name, last name, date of birth, address.
 - Create the associated methods to access and modify the properties
 - Create a method to return the age
 - Search for information related to the date object
 - Create a virtual method to display all the information about a person
 - Create a virtual method to obtain a JSON object from all the information about a person

- Student with the properties ID, current GPA, current units
 - Create a constructor to create a default student
 - Create the associated methods to access and modify the properties
 - Create a method to display all the information about a student
 - Create a method to transform all the information about a student into a string
 - Create a method to obtain a JSON object from all the information about a person
- Faculty with list of courses to teach, rank, department, college
 - Create the associated methods to access and modify the properties
 - Create a method to transform all the information about a student into a string
 - Create a method to display all the information about a faculty
 - Create a method to obtain a JSON object from all the information about a person

(We will reuse these classes when we will add a form where we will connect the input from the forms and the objects of these classes.)