

Lab 10: Web Programming - CSci130

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Goals: The goal of this lab is to create a form to browse and edit a list of objects that are stored in a file in PHP. Modifying lab 8, now we want to edit the information related to the data. (The next step will be to use a relational database management system instead of a simple JSON file).

Remark: Make sure you complete all parts of these labs as they will be your data browser project.

Learning outcomes: PHP syntax, classes and objects with PHP, JSON with PHP, POST, GET.

We consider the code from Lab 8 to load and present a list of data. We want to edit the elements that are contained in the JSON file, add, and remove elements. You consider the following buttons corresponding to the car example:

- Button “Previous Car”: Use AJAX to obtain the previous car: PHP will echo the previous car.
- Button “Next Car”: Use AJAX to obtain the next car: PHP will echo the next car.
- Button “Edit : Toggle on/off the readonly property of the text boxes in the form)
- Button “Save” the record: Save the array of cars in Javascript
- Button “Save all” the database: Save the whole collection in a file on the server side: the database is saved via PHP.
- Button “Delete” the current record (delete an element of the array, go to the first element): Delete a car in the array of cars in Javascript
- Button “Insert” a new element: Add a new car in the array of cars in Javascript, and go to the position of the inserted car, which contains empty fields.

Display the position of the current displayed car and the number of cars in the list for debugging purposes. Example: (5/10) → it corresponds to the fifth car out of 10 cars that are in the database.

Key functions to implement:

- Form to JS Object Car (JS+DOM)
- JS Object Car to Form (JS+DOM)
- Retrieve Car x from the server (JS+AJAX)
- Retrieve Car x from the JSON file (PHP)
- Send array of cars to the server (JS+AJAX)
- Retrieve an array of cars and save it into a JSON file (PHP)

TEST each PHP script as a standalone script to verify it works properly:

```
If (isset($_POST["myvar"]))  
    $myvar=$_POST["myvar"];
```

```
Else
```

```
$myvar= "Default value"; // so $myvar doesn't need to be defined from the AJAX call
```

When you will load the page, you will automatically retrieve the list of cars from the server, as it is stored in a file (you can consider a default filename that corresponds to your JSON database).

After completing this lab, you should be able: Create/Insert/Remove/Display/Save/Load an object from a list of objects that is stored on the server in a JSON file using HTML/JS/AJAX/PHP.