



## Assignment 9 (NF)

*Due: Mon 12.01.2015, 16:00h (4 Weeks)*

### Task 1: City Search with jQuery AJAX

Please create a web application that allows users to search for German cities via their postal code (PLZ). The web application should be built with HTML, JavaScript (jQuery) in the front end, and PHP & MySQL in the back end.

Your app should have the following features:

- There is a text field for the postal code that only accepts numbers. Its purpose is to find cities that have this postal code.
- As the user starts typing, the app asks the back end for matching cities. The results are loaded asynchronously. The responses are displayed as a list below the text field. Both the actual postal code and city name are shown.
- A PHP script that queries a MySQL database delivers the city names. It takes POST parameters and returns the found cities as JSON Object. The front end can process this JSON object easily to display the result.
- **Optional:**  
Allow the user to type in a city name and find out its postal code. Write a second PHP script for this feature that answers POST requests.

Notes:

- You can write a database setup script that inserts the city names and corresponding postal codes into a table on your own. Look into the material of tutorial 4 to recall how to use the database offered at the CIP Pool.
- If you happen to run XAMPP on your own computer (recommended), you might want to use the database setup script that comes with the material for this assignment. To do that, simply enter your credentials (username, host, password) into the databaseSetup.php file and put it into your server folder (on Windows this might be: C:/xampp/htdocs/). Then execute the script by navigating to <http://localhost/databaseSetup.php>. Your browser will tell you whether the data was inserted successfully.

**Please turn to page 2.**



### **Task 2: Front end vs. Back end**

- a) Please describe in your own words, what “front end” and “back end” mean in the context of web applications.
- b) Modern clients (e.g. laptops) have high computational capabilities. Find out what the terms “thin client” and “fat client” mean and describe them in your own words. When writing web apps, where do you encounter fat and thin clients? What do you have to consider for each of them to make your application fast?

### **Notes:**

- Please make sure to comment your code to facilitate fast correction of your submission.
- Incomplete submissions are welcome. In that case, please make sure to include a Readme.txt file in which you tell us, what parts are not working.

**The media informatics and human computer interaction groups wish you happy holidays!**