CIS408 **Project 5**

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Creating an Online Catalogue Search for CD Collection with JQuery, AJAX and PHP Using a Relational Database Server

The catalogue of **CD Collection** has millions of CD product information. In Project 5, you are implementing a web service: Online Catalogue Search System for the **CD Collection Company**.

You may choose any database server with any web application platform. Some Suggestions:

1. LAMP/WAMP Server with PHP and MySql Server.
2. ASP .NET with Angular JS and MS SQL Server

- Use Bootstrap for Responsive Web Design.
- Implement this project with AJAX call (for example, JQuery with AJAX Call or Angular JS with AJAX call) to request the Server side file.

Your Client and Server side codes have four parts:

UI and Client Side:

1. Create Webpages for an Online CD product search with a menu:

1-1. Product search page to let users search for CDs by CD name, Artist name, Price, Year.
1-2. On User's Click on the Search button with Search input, send the user's input value as parameters to get the response of the server side with the CD search result in JSON format.
1-3. Display the information of the CDs from Server's response (in JSON) on the Webpage.

Server Side has two parts of tasks:

Create a Database from the XML Data

1. Assume that your server get XML data cd_catalog.xml that has CD product information from another site.

(XML data file cd_catalogue.xml is on the class webpage)

2. Process the input XML document to extract the information for each CD product to write them in .CSV files that will be transformed into a SQL table in your database or you can directly create a table in your database server from the XML data.

Retrieving User's Search from the Database and Create the Response

3. On request from the client side, Get user search input and connect to your database server to retrieve the CD information from the table you create in Task 2 and get the result from a database server and process the result to create in JSON format as the server side response to your client.

Notes:

Cross Domain File Request: Access across Domains

For security reasons, modern browsers do not allow access across domains.

This means that both the web page and the XML file it tries to load, must be located on the same server.

For example, the examples on W3Schools all open XML files located on the W3Schools domain.

If you want to use the example above on one of your own web pages, the XML files you load must be located on your own server.

Same Domain File Request:

With Google Chrome: Need a local Web Server to request a file using AJAX with JQuery on the local host.

Firefox allows a local file request in Java Script without a Server .

FAQ:

Q:

When converting xml to csv, can we use plain java and upload the output csv to our db? Or must it all be done through JavaScript to convert the xml to csv and upload to our db?

Answer:

Yes, converting to CSV file can be done in Java separately. There is not a well known straightforward auto process for converting XML to CSV and create a table in SQL Server from the converted CSV file. Not in Java script !

The entire automated process is usually implemented in Java or C# or any high level language through Rest API and then CSV converting process, and creating a table in database through ODBC/JDBC. It is actually a difficult process to an undergrad level course.

Lab5 is not asking the automation of the entire process.

XML parsing to create a database can be done separately in any server side script/language before the server side search script in PHP is done. PHP also has a good API to load XML file and create a table from it as well. I was going to go over this in class, you are ahead of it. :) good going !

Submission:

Turn in your Output **BOTH** In Class and on Blackboard as follow:

1. All your code files, input and output files
2. Printout of your report in a doc file that shows the text of all your codes, your XML input file, and your output in JSON and the screen captures of the executions in sequence.
3. Your output screen captures include:

    - Your database table contents that has all the CD product information that were extracted from XML data file
    - The Server response in JSON
    - Each Webpage Capture showing each Execution Step and the results