

WAP CS472 - Final Project

Create a **Dictionary** enquiry form using all the technologies we learned in this course (HTML, CSS, JavaScript, JSP and Servlets). Search operation should be performed using Ajax. Data should be exchanged in JSON format.

There is a mysql database in the Resources directory, **englishdictionary.sql**. You can import it into the mysql database on your machine.

You will need to install MySQL Server:

- Standalone: MySQL Community Server <http://dev.mysql.com/downloads/>
- Download MySQL Workbench

Or you can use XAMPP:

- Download XAMPP
- Run Apache and MySQL (it comes with PHPMyAdmin)

Download **mysql-connector-java** and configure the connector with your Web Project in Eclipse.

To import the database manually from the command line:

1. `mysql -u root -p` (where root is your username as appropriate)
2. `source d:\englishdictionary.sql` (assuming you have downloaded the englishdictionary.sql file to the root of your d directory)
3. You may use the simple JDBC java file DBconnection.java provided in the project folder.

You should format all data coming from DB into a JSON string and return that to your Ajax query.

- Use JSON-Simple <https://code.google.com/archive/p/json-simple/downloads>
- Example of parsing JSON <http://www.mkyong.com/java/json-simple-example-read-and-write-json/>

Below is an example of the sort of response you should get from a query for the word “apple”.

word	type	definition
apple	n.	The fleshy pome or fruit of a rosaceous tree (<i>Pyrus malus</i>) cultivated in numberless varieties in the temperate zones
apple	n.	Any tree genus <i>Pyrus</i> which has the stalk sunken into the base of the fruit; an apple tree
apple	v.i.	To grow like an apple; to bear apples

Important notes:

- You must use MVC architecture
- You must use Ajax to perform the dictionary search. Main page should not refresh!

Extra point: Using jQuery UI <https://jqueryui.com/autocomplete/> to perform an ajax calls and show an autocomplete menu.