

Lab 10 – XML, JavaScript and JSON

Purpose

- Explore XML, JavaScript and JSON
- Upload your website to a Web server

Due Date

- This lab must be handed in:
Friday Dec 01, 2023 – before midnight

Assessment

- This Lab is worth 2% of your total course mark.

Assigned Readings

- **Lecture Slides** posted on Brightspace:
 - Module 5
- The following chapters of **Fundamentals of Web Development** will be useful in completing this exercise:
 - Chapter 6, 15, 17
- Sample code:
 - JSONArrayOfObjects.zip

Lab Supplies

To complete this lab you will require the following lab supplies:

- Lecture Slides (**Module 5**) posted on Brightspace
- Textbook: **Fundamentals of Web Development** by Randy Connolly and Ricardo Hoar
- EasyPHP, or other WAMP server
- Eclipse, Notepad (or other text editor, or IDE)
- FileZilla (or other FTP client)

Summary of Tasks

1. Develop the logic to display your web application
2. Upload your website to the webserver
3. View your webpage using a web browser
4. Submit Lab Link on Brightspace
5. Submit Source code on Brightspace

Task 1

Download the template file (***`XML_JS_JSON.html`***) and the XML file (***`Books.xml`***) from Brightspace (Course Content -> Labs-> Lab 10 -> Lab10Template.zip).

Create and display an array of JSON objects from a XML file

You need to write a JavaScript function inside the template file that

- Retrieves (process) the content of the XML file using JavaScript.
- Creates an array of JSON objects equivalent to the provided XML file (Each book info is an instance of a JSON object).
- Displays the elements of the array of JSON objects using JavaScript loop statement.

The sample output is as follows:

```
CATALOG
BOOK (1):
Author: Goodenough, Matthew
Title: SQL Developer's Guide
Genre: Computer
Price: 45.95
Publish Date: 2000-10-01
Description: An in-depth look at creating applications with SQL.

BOOK (2):
Author: Ball, Kim
Title: Managing Risk
Genre: Finance
Price: 7.97
Publish Date: 2000-10-04
Description: A former architect builds corporate models, as a risk architect, and has been identified as being one of the world.

BOOK (3):
Author: Coth, Eric
Title: Linux's Secret
Genre: Fiction
Price: 7.97
Publish Date: 2000-11-07
Description: After the collapse of a nanotechnology venture in England, the young partners for the foundation for a new venture.

BOOK (4):
Author: Evans, Eric
Title: Obama's Legacy
Genre: Fiction
Price: 8.95
Publish Date: 2001-01-10
Description: In post-apocalyptic England, the secretions agent known only as Obama helps to create a new life for the inhabitants of London. Inspired by Obama's description.

BOOK (5):
Author: Coth, Eric
Title: The Standard Grid
Genre: Fiction
Price: 7.97
Publish Date: 2001-01-10
Description: The first daughter of Obama's half sister, finds one another for control of England. Inspired by Obama's description.

BOOK (6):
Author: Randall, Cynthia
Title: Lyle's Book
Genre: Fiction
Price: 4.95
Publish Date: 2000-09-07
Description: When Carla meets Paul at an evolutionary conference, she is as fast as a bullet.

BOOK (7):
Author: Tarrant, David
Title: Nihilism
Genre: Fiction
Price: 4.95
Publish Date: 2000-11-07
Description: A story about a man who finds himself in a world of nihilism.

BOOK (8):
Author: Evans, Eric
Title: Obama's Legacy
Genre: Fiction
Price: 8.95
Publish Date: 2001-01-10
Description: In post-apocalyptic England, the secretions agent known only as Obama helps to create a new life for the inhabitants of London. Inspired by Obama's description.

BOOK (9):
Author: Coth, Eric
Title: The Standard Grid
Genre: Fiction
Price: 7.97
Publish Date: 2001-01-10
Description: The first daughter of Obama's half sister, finds one another for control of England. Inspired by Obama's description.

BOOK (10):
Author: Evans, Eric
Title: Obama's Legacy
Genre: Fiction
Price: 8.95
Publish Date: 2001-01-10
Description: In post-apocalyptic England, the secretions agent known only as Obama helps to create a new life for the inhabitants of London. Inspired by Obama's description.

BOOK (11):
Author: Coth, Eric
Title: The Standard Grid
Genre: Fiction
Price: 7.97
Publish Date: 2001-01-10
Description: The first daughter of Obama's half sister, finds one another for control of England. Inspired by Obama's description.

BOOK (12):
Author: Coth, Eric
Title: The Standard Grid
Genre: Fiction
Price: 7.97
Publish Date: 2001-01-10
Description: The first daughter of Obama's half sister, finds one another for control of England. Inspired by Obama's description.
```

N.B.: To display the output locally, you need to browse the file using EasyPHP web server.

- The function should be invoked when the appropriate button (i.e., **JSONDisplay!**) is pressed.

Task 2

Create Lab 10 submission folder '**Lab10**' and copy *XML_JS_JSON.html*, *Books.xml* into this folder.

Task 3

Upload your website for Lab 10 into the Web Hosting Server by uploading '**Lab10**' folder inside the 'public_html' directory of 'SiteGround' Web Hosting domain using DashBoard.

The 'File Upload' instruction is posted on Brightspace ([Course Contents -> Module 1 -> Part 2 -> SiteGround_FileUpload_Instruction.docx](#)).

Task 4

View your websites for Lab 10 using a web browser. Open a web browser and navigate to the following web address:

http://your_web-hosting_domain_name/Lab10/<filename>

For example, the sample URL for Lab 10 on an arbitrary web hosting domain is:

rejaulc.sgedu.site/Lab10/XML_JS_JSON.html

where 'rejaulc.sgedu.site' is the name of an arbitrary web hosting domain, '**Lab10**' is the submission folder for Lab 10, '[XML_JS_JSON.html](http://rejaulc.sgedu.site/Lab10/XML_JS_JSON.html)' is the homepage of Lab 10.

Task 5

Once you have confirmed that your webpage is available online, you are ready to hand in your lab. Create a compressed file (**Lab10.zip**) which will contain the following file:

- *XML_JS_JSON.html*

Create a word document (**Lab10.doc**) in which write the following Information:

- Student Number, First Name, Last Name
- The URL, or hyperlink of the web page ([XML_JS_JSON.html](http://rejaulc.sgedu.site/Lab10/XML_JS_JSON.html)) of Lab 10

To hand in your lab go to Brightspace and navigate to Content → Labs and click on 'Lab 10 – XML, JavaScript and JSON' link.

Upload the word document (**Lab10.doc**) and the compressed file (**Lab10.zip**) on Brightspace. Finally, click the 'Submit' button to send the lab to your professor.

Please keep in mind that **ONLY .zip** file is accepted as the format of the compressed file.

IMPORTANT NOTE: If the URL, or hyperlink, does not direct the professor to the lab you will receive a ZERO for the lab assignment.