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JavaOneSM

LAB-5573: Leveraging JavaScript Toolkits for End- to-End Connectivity in Web Applications

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Instructor-Led Hands-on Labs

Instructor(s) will provide background for exercises

Exercises are self-paced

- Hard-copy and online lab guides are available

- Use suggested durations as a guide

Raise your hand at any time for assistance

To get the most out of the lab...

- Read** the lab guide, especially the background

- Don't** just copy and paste the solutions

Housekeeping

Before you leave, **please** fill out a survey and hand it to someone before you leave

We **really** want to know what you think!

Please log out of your machine when done

Please look around to make sure you have all of your belongings

The hard copies of the lab guides are yours to keep

Leveraging JavaScript Toolkits for End-to-End Connectivity in Web Applications

- > JavaScript toolkits – standard for Web 2.0 interactive applications
- > 'End-to-end connectivity' – communication between the client interface and a back-end data store
- > AJAX response: XML, HTML, JSON
- > NetBeans IDE provides an environment for all tiers of web development
- > Bundled JavaScript toolkits – useful for prototyping (NetBeans 6.5 – 6.7M2 only)

Who this lab is for

- > Front-end developers who want to gain better insight into how data is stored, processed and sent to the client
- > JavaScript and JavaScript toolkit enthusiasts who want to explore NetBeans' capacity for Web 2.0 development
- > Java web developers, who want to understand the basics of toolkit integration in web projects

Exercises

Exercise 1: Connecting a Script.aculo.us Autocomplete Field to a MySQL Database

Expected duration: 40 minutes

Exercise 2: Connecting a Dojo Tree to an ArrayList using JSON

Expected duration: 25 minutes

Exercise 3: Connecting a YUI DataTable to a Java DB Database with JPA

Expected duration: 25 minutes

Getting Started

If you have not logged in, log in with

username: <5573>

password: javaone09

Online lab guide will open in a browser window

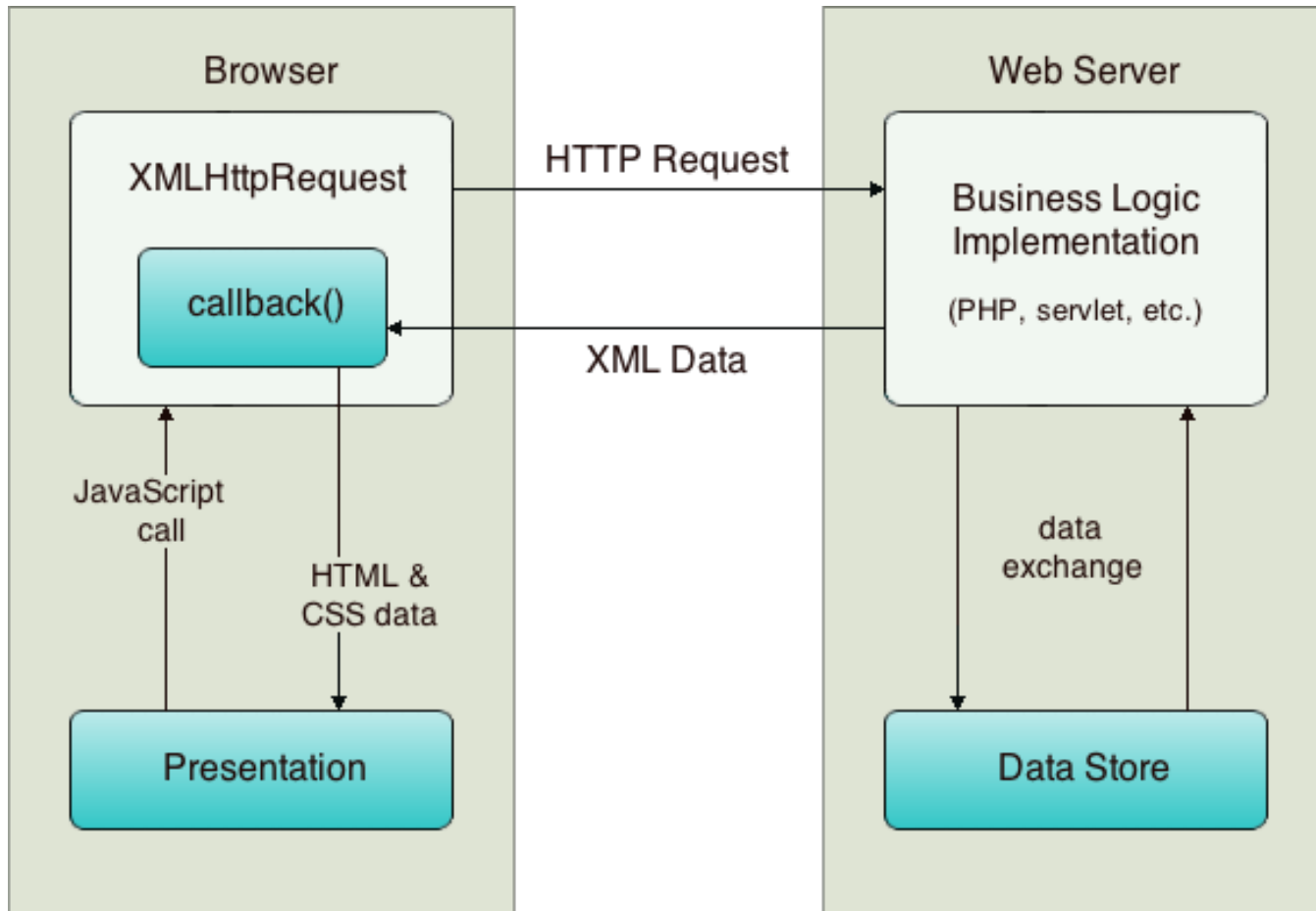
All necessary software and lab files are already installed on your lab machine

Start from **Exercise 1**

Exercise 1 Connecting a Script.aculo.us Autocomplete Field to a MySQL Database

- > AJAX = Asynchronous Communication
- > NetBeans JavaScript debugger
- > HTTP Client Monitor
- > Data in HashMap → MySQL database table
- > Hand-coded autocomplete implementation →
Script.aculo.us: `Ajax.Autocompleter()`

Process Flow of Client-Server Communication



Exercise 2 Connecting a Dojo Tree to an ArrayList using JSON

- > JSON = JavaScript Object Notation
- > json.org – Java libraries exist for JSON conversion
- > Servlets must set content type for JSON:

```
response.setContentType( "application/json" );
```
- > Dojo classes:
 - `dojo.data.ItemFileReadStore`
 - `dijit.Tree`

Exercise 3 Connecting a YUI DataTable to a Java DB Database with JPA

> YUI DataTable

- Progressively enhanced HTML markup
- `YAHOO.widget.DataTable()`
- `YAHOO.util.LocalDataSource()`

> Java Persistence API

- Entities mapped to a relational database table
- GlassFish V2: TopLink Essentials
- Database transaction support

Congratulations!

You should now have completed this lab

If you would like more time to continue working,
please consider taking the lab exercises with you

Discs containing all of the labs offered this year are
available for you to take home

The lab guide will tell you where to get help with this
lab after JavaOne

Thank you for attending this hands-on lab!



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Thank You

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