

INFO-H-511: Web Services

TP 5 - Presenting Web Services

Lecturer: Stijn Vansummeren
Teaching Assistant: Francois Picalausa
<http://cs.ulb.ac.be/public/teaching/infoh511>

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Part I: Concepts

HTML and web application is a popular way of presenting Web Services. This way of presenting web services has its own pros and cons. Reading through the following pages, answer the following questions:

- Make a list of the new features introduced by HTML5. What are the problems with these new features? What is a polyfill? What is feature detection, and why is it a superior alternative to user-agent sniffing?
 - <http://slides.html5rocks.com/#class-list>
 - <http://remysharp.com/2010/10/08/what-is-a-polyfill>
 - <http://modernizr.com/docs/>
- What is a CDN? What benefits can be gained from using them? What are their disadvantages?
 - <http://www.asp.net/ajaxlibrary/cdn.ashx>
 - <http://williejackson.com/making-wordpress-faster-integrate-a-cdn>
- What is AJAX? What does “Same origin policy” mean and how does it apply to AJAX? Why is it nevertheless possible to use third-party analytics packages or css in script and link elements?
 - [http://en.wikipedia.org/wiki/Ajax_\(programming\)](http://en.wikipedia.org/wiki/Ajax_(programming))
 - http://www.w3.org/Security/wiki/Same_Origin_Policy
 - http://www.kendoui.com/blogs/teamblog/posts/11-10-04/using_cors_with_all_modern_browsers.aspx

Part II: JSON

AJAX is often used in combination with the JSON data format. JSON is supported by many different programming languages and in particular in javascript. This makes it an ideal candidate for exchanging data between restful web services and web applications.

During the second lab, we developed a RESTful address book service where resources were represented with Atompub and the following operations were supported:

URL	Method	Semantics
/contacts	GET	Retrieve a list of links to each contacts
	POST	Create a new contact and add it to the list
/contacts/{id}	GET/PUT/DELETE	Retrieve/modify/remove the contact corresponding to <i>id</i>
/groups	GET	Retrieve a list of links to each group of contacts
	POST	Create a new group of contacts
/groups/{name}	GET/PUT/DELETE	Retrieve/rename/remove the named group of contacts. The representation of a group contains a link to its list of contacts.
/groups/{name}/contacts	GET	Retrieve the contacts of the specified group
	POST	Add a contact to the group. If the posted document does not contain an existing <i>id</i> , a new contact will be created.
/groups/{name}/contacts/{id}	GET/PUT	Retrieve/modify the specified contact
	DELETE	Remove the contact <i>from the group</i> .

Provide an example JSON representation for:

- A contact
- A group of contact
- The list of all contacts
- The list of contacts of a group

Part III: An Address Book Web Application

Our address book web service has been extended to support JSON, and is available on the labs web page. A web application is also provided, that you can install by adding the `contacts` directory into your home directory.

- Using CURL, browse the JSON implementation of the service. The MIME type is `application/json`.
- Using a web browser, open the application along with a web development tool such as Firebug. Identify the components loaded from CDN. Identify the JSON documents that are loaded.
- The web application relies on AJAX to update its display¹. Identify in the javascript code how the updates are applied. In particular, notice that no XMLHttpRequest object is referenced in the code. Explain how this is possible.
- Each update refers to both a *mustache* and a *JSON* resource. What are their respective role?

Additionally, you will implement the following missing features of the contact page:

- The contact is not deleted when clicking the corresponding button.
- A correct contact picture should be retrieved from `http://en.gravatar.com/`.

¹Real-world applications should always provide alternatives to AJAX, to support older browsers or browsers where scripts are disabled.