Assignment 6 (HF, major subject)

Due: Wed 07.12.2016; 20:00h (1 Week)

Goals
After doing these exercises, you know how to use Vanilla JS to...

- Access and modify the DOM
- Handle events
- Perform Ajax Requests

Do not use any library / framework for this assignment. #UseThePlatform

Task 1: Picture Slide Show  Difficulty: Easy

Create a webpage from scratch. It should have a slide show / image carousel. The user can click two buttons (left/right) to browse through the available images one at a time. If the final slide is reached, you can either prevent going further, or start from the beginning (cycle). The number of the current slide should be displayed somewhere on the page (it doesn’t have to be on top of the images). Watch a demo here: https://youtu.be/dr_JKOyXdFA

Include all code files in your submission in a folder “task01”.

Figure 1 - Image Source: https://app-layout-assets.appspot.com/assets/bg1.jpg
Task 2: RSS Ticker Page

Create a web-page that shows an RSS-Ticker from different sources. If the user clicks on a ► Button, the page is refreshed with new articles from a randomly selected RSS feed. The page content is refreshed every 60 seconds. Instead of actually refreshing the entire page, the content is loaded asynchronously with Ajax.

Loading RSS feeds, which are just XML files, with Ajax is not possible in a straightforward way, due to the Same Origin Policy (SOP) implemented in many browsers. To make this possible, you need a proxy. We provide a PHP script that acts as a proxy for URLs to XML files.

Set-up:

a) Download the material for this assignment. You’ll find it on the web page and in the GitHub assignments repository.
b) Start your apache server (e.g. with xampp).
c) Put the file xml-proxy.php into your web-server root folder, e.g.
   C:\xampp\htdocs\ (Windows)
   /Applications/XAMPP/htdocs/ (macOS)
   /home/yourusername/public_html/php/
d) Open a browser and go to
   http://localhost/xml-proxy.php
   respectively http://php.cip.ifi.lmu.de/~yourusername/php/xml-proxy.php

Figure 2 - Watch a demo here: https://youtu.be/pQtRZYxk8CE
The proxy script allows passing a URL. What it does is to load the file from that URL, parse it and return it as a JSON, which we can easily use with JavaScript.

For example:

To load the How-To-Geek RSS Feed, we can use:

Here is a list of RSS feeds, but you can add as many as you like

- http://feeds.gawker.com/lifehacker/full
- https://www.technologyreview.com/stories.rss
- http://feeds.feedburner.com/Techcrunch/europe
- http://feeds.feedburner.com/HowToGeek

Now that you are set up, you can implement the web page functionality in load-rss.html

a) Randomly select a URL from which to load the feed.
b) Assemble the URL for the proxy (see above) that you can use with Ajax
c) Perform the Ajax request with an XMLHttpRequest
d) Handle the response and show the articles.

Use the developer console to inspect elements and debug errors. If you have any questions, please ask them on Slack or during the CodeLabs.

Include all code files in your submission in a folder “task02”.


Submission
Please turn in your solution via UniWorX. You can form groups of up to three people.

We encourage you to sign up for Slack! All you need is a CIP account and an email address that ends in “@cip.ifi.lmu.de”. Ask us if you don’t know how to get them.

If you have questions or comments before the submission, please contact one of the tutors. They are on Slack @tobi.seitz, @peterjuras and @thomas-weber. Remember, that they also want to enjoy their weekends 😊

It also makes sense to ask the question in our #mmn-ws1617 channel. Maybe fellow students can help or benefit from the answers, too!

CodeLabs
As always, everyone is invited to participate in the CodeLabs on Wednesday between 6 and 8 pm. We encourage you to go there if you struggle with installation or nasty bugs that just don’t seem to go away. The times are flexible, so you can join anytime during the CodeLab hours.

Open Lab Day