Assignment 5 (HF, major subject)

Due: Wed 30.11.2016; 20:00h (1 Week)

Goals

This assignment trains you in...

- Understanding the purpose and problems of API keys
- Using API keys to authenticate Ajax requests
- Performing Ajax requests to different URLs and aggregate the results.

Task 1: API Keys   Difficulty: Easy

There are a couple of services that offer public APIs, but most require an API key.

Answer the following questions:

a) Why are API keys necessary?
b) Which benefits do they provide?
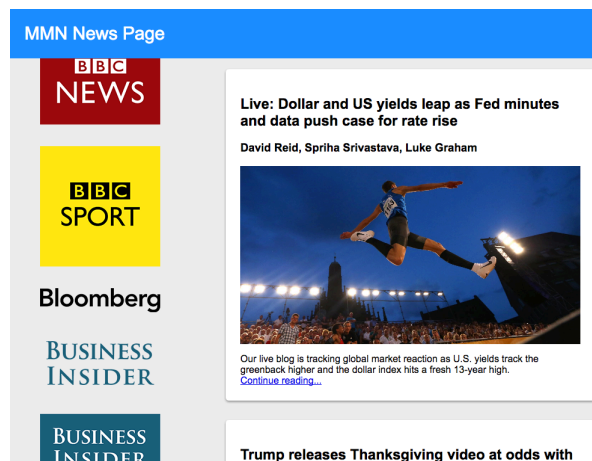c) Which problems do they generate?

Write down the answers in a file "task01.txt" and include it in your submission.

Task 2: News Page   Difficulty: Medium

Create web page that aggregates news from different content providers. We propose you use the API provided by https://newsapi.org, but you are welcome to use any other source.

First, you need to register for an API key at https://newsapi.org/register. The provider is professional and does not send you junk email.

Watch a demo of the news page here:
https://youtu.be/ZEE1LM9IbRU

By the way: You can subscribe to the playlist that contains all videos we create for this course here:
http://bit.ly/mmn-videos-1617

As you can see in the video, the page should allow the user to:

a) Browse a list of sources provided by newsapi.org. The endpoint for this is:
https://newsapi.org/v1/sources?language=en
  - Use $.get() to fetch the list of sources
  - Append an <img> with the correct src attribute to a list.
  - Set the id attribute of the <img> to the source id. This will allow you to identify which source was clicked later.

b) Load a news feed by clicking the name or logo of a source, e.g. Buzzfeed. The endpoint for this is: **https://newsapi.org/v1/articles**
  - The endpoint requires the parameters apiKey and source
  - Use .click() to add a click handler to the images. Read the source id with **this.id** inside the click handler.
  - Use $.get() with the correct parameters to fetch the articles from the source.

c) View the news feed. Each article should contain a title, author, thumbnail, and short description (if available).
  - Look at a sample result here https://newsapi.org/#documentation to identify the correct property names, e.g. article.description.

d) Click a link to read the full article
  - Each article object from the news API contains a URL

Include all your code files in a folder "task02" in your submission

Task 3: Extended Spotify Search   Difficulty: Medium

In the tutorials, you created a page that allowed the user to search for artists through the Spotify API. We encourage you to play around with the API and see what you can come up with. Here's some input:

- Song previews using the preview_url property of a track
- After searching for an album, list all songs of a specific album and their length if the user clicks on the album cover.
- Visualize the popularity of an artist.
- Anything that comes into your mind ☺

Put your solution (all program code) into a folder "task03" and include it in the submission.

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.