Assignment C HTML5 / CSS3 Mashup

Flickr Photo Browser

See http://en.wikipedia.org/wiki/Mashup_(web_application_hybrid)

This assignment requires you to build a Web app in HTML5 and CSS3 that creatively uses the Flickr API to visualize and/or browse its photo collection. Unlike the previous two assignments – where your work was based on adherence to a strict specification – this assignment tests judgment and creativity in understanding of modern Web technologies and making appropriate design choices to create an interesting user experience.

The objectives are as follows:

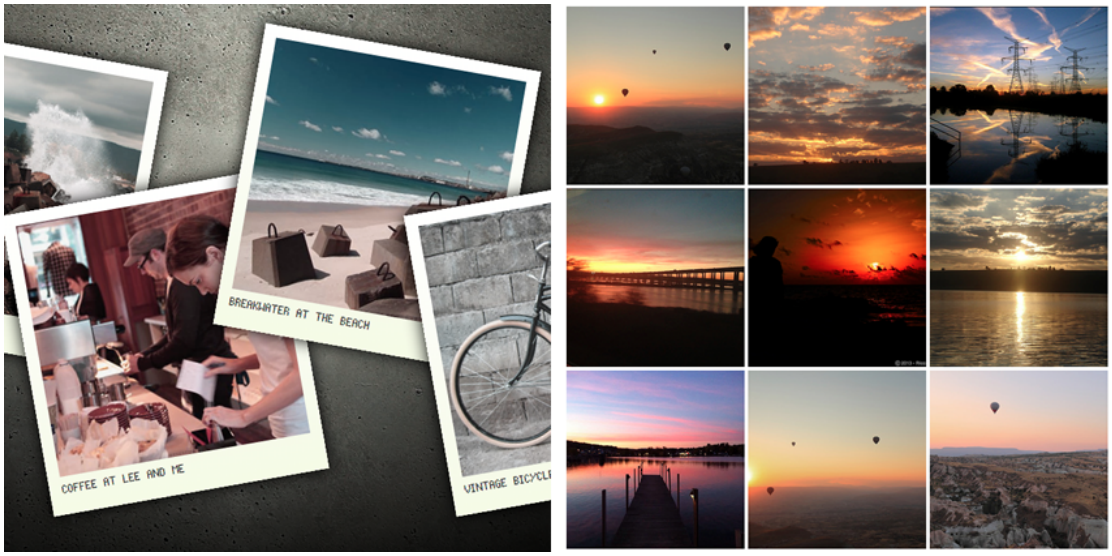
- Construct layouts and web pages using best practice HTML5 and CSS3.
- Build web apps and user experiences using JavaScript and jQuery.
- Familiarize yourself with Web-based APIs.
- Creatively exploit modern Web technologies to build an interesting user experience.

This assignment is worth 15% of the course mark. It is due Friday Week 20, May 20th at 14:00.

You are required to implement a Web app that allows the user to browse and visualize the Flickr photo collection

In Week 16 and 17, I demonstrate Hipstergram and the Flickr Photo Viewer, see http://www.itu.dk/people/petw/flickr/ and http://www.itu.dk/people/petw/hipster/

In Week 19 I will demo other technology that showcase features such as geo-location, local storage and offline Web apps. These technology demos are intended to demonstrate the kinds of user experiences that you could build using HTML5, jQuery and CSS3.



***Hipstergram* (left), and the *Flickr Photo Viewer* (right)**

In this assignment, you will create a Web App that creatively uses the Flickr API and allows the user to *browse* and *visualize* the Flickr photo collection.

- By *browse*, I mean the ability for the user to search the photo collection, browse it by category or tag, and navigate through a series of search results.

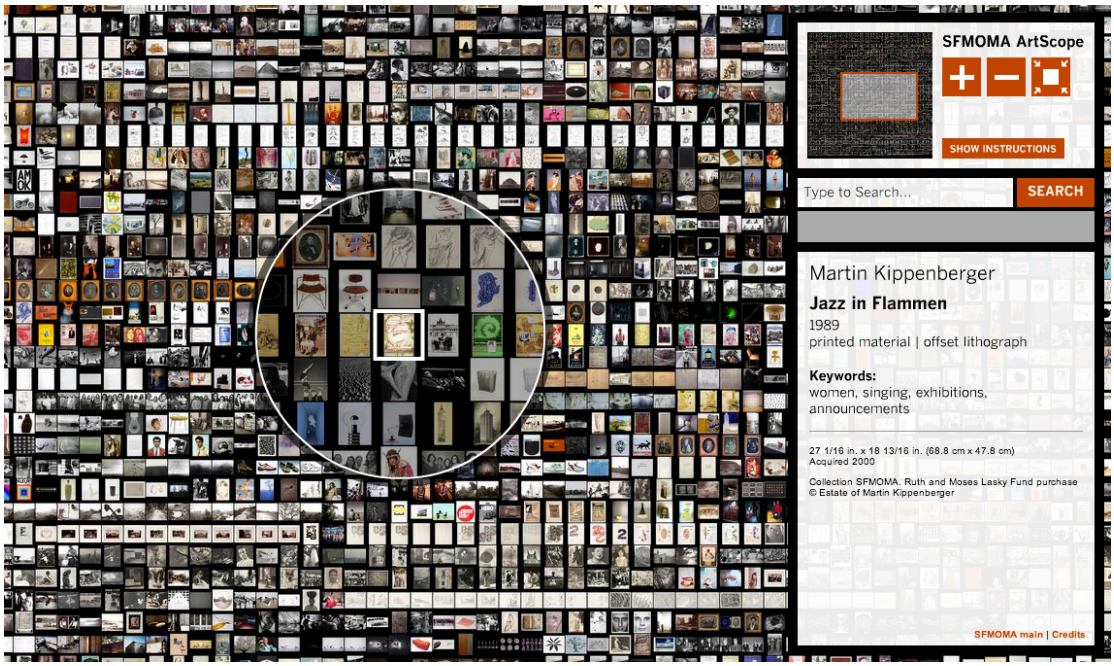
- By *visualize*, I mean the ability of your Web app to present the photos provided by the Flickr API in an interesting way.

You are free to implement this assignment anyway you wish, given that your app affords the ability to *browse* and *visualize* the Flickr photo collection, and that you adhere to the marking criteria and requirements listed in the remainder of this document. People often ask, can I use another API? Yes, you can, just ask.

This is a creative project based on broad specifications. Therefore, your work will be assessed on creativity and originality, rather than adherence to strict specification.

To demonstrate the idea of *browsing* and *visualizing*, I encourage you to check out SFMOMA's ArtScope, a visualization project built in Flash that showcases artworks from the San Francisco Museum of Modern Art.

http://www.sfmoma.org/projects/artscope/



SFMOMA's ArtScope *visualizes* its collection, and also offers the ability for the user to *search* and *browse* it.

- The collection is *visualized* as an expansive, draggable, zoomable canvas.
- You can *browse* the collection by dragging the canvas or by being able to search directly for works.

You are free to be as inventive as you wish given that your assignment adheres to these broad specifications. If you want to copy ArtScope you can but such a solution would not score highly on the creativity criteria.

Your Web app needs to do the following:

1. Your web app must implement the ability to *browse* and *visualize* photos from the Flickr API, as highlighted above.

2. Your web app must implement at least THREE of the following technologies:

- CSS3 animations
- HTML5 Geo-location functionality
- HTML5 Local Storage persistence
- Google Maps API
- The <canvas> HTML5 element
- Drag and drop interaction

3. For each of the THREE technologies chosen from the list, you must a) implement that technology in your Web app so that b) it supports a feature or enhances the user experience and c) write – in a brief statement (no more than 50 words) *how* that technology supports a feature within your app or otherwise enhances the user experience **in a non-trivial way.** As

an example here is a list of each technology along with a statement on how that technology could be used to enhance the user experience of your photo browser.

The technology	Reason / use case
CSS3 Animations	Provide a visually pleasing user experience, enhance usability through the use of animations / provide visual momentum.
HTML5 Geolocation	Provide location-awareness - being able to map or browse photos near the user's or object's physical location.
HTML5 Local Storage	Provide the ability for the user to add 'favorite' photos and create their own local gallery or see on return to the app what is stored on the user's device or browser.
Google Maps API	Being able to browse or visualize photos on a map, being able to interactively browse the content based on map and image location.
The <canvas> element	Being able to visualize photos on a graphical canvas combined with other graphical elements, rather than use a conventional layout. To take a local copy of an image and annotate it graphically for example.
Drag and drop	Being able to physically re-arrange photos or otherwise use drag and drop as a way of interacting with the images and your app.

Note this list is an example, not exhaustive – you are free to use your three technologies in anyway as long as the reason makes sense, and that the technologies are implemented in a non-trivial way.

The Flickr API

You are required to interact with the Flickr API in order to use their data. To do so, details for obtaining and registering for an API key can be found here:

http://www.flickr.com/services/api/misc.api_keys.html

Once you have an API key, I encourage you to read through the API documentation here:

http://www.flickr.com/services/api/

The API documentation describes how you can use your Web app to interact with the Flickr's photo collection. The API is quite extensive, and I advise you to read through its documentation.

Marking Criteria

The marking criteria are as follows:

- As a minimum, your Web app should be able to request data from the Flickr API using jQuery and then display the results of that API request within the Web browser (2 marks).
- The user should, at least, be able to *browse* the photo collection where the results are presented (i.e., *visualized*) in some form or another (3 marks).
- For each of your three chosen technologies (3 x 5 marks each = 15 marks)

    - Non-trivial implementation of that technology that provides an additional feature or otherwise enhances the user experience (4 marks).
    - Brief, 50-word justification of the technology (1 mark).

- Innovation, creativity and originality (10 marks). Submissions that provide an interesting, compelling and visually pleasing user experiences that make creative use of your chosen technologies will attract a higher mark. Unoriginal submissions that merely copy or replicate the work shown in the lectures and lab demonstrations will attract a lower mark.

Submission Guidelines

The assignment is due for submission on Friday of Week 20 which is Friday Week 20, May 20th at 14:00. All work should reside on your directory on frwaw.itu.dk Specifically, upload to:

http://studentname.frwaw.itu.dk/assigmentC

Where *studentname* is your username.

Your submission should include all relevant HTML, CSS and JavaScript files, along with a text file (readme.txt) that describes your chosen three technologies, each with a 50 word justification of how that technology enhances the user experience. There is no need to submit anything via LearnIT. We will, however, use the to mark and grade your work as we have done for the last two assignments, so be sure to log in again to check your mark.

In your work, please ensure that you use your own Flickr API key rather than the API keys provided in the lab demos or from Flickr's API explorer.