01 10 2015

SEWN 2015 - Lab 1 (Assessed Coursework) – Search engine optimisation and syndicating dynamic content

In this lab you will design, create and publish a website that is likely to be ranked highly in search engine results pages (SERPs) for specific queries, and which contains some dynamic content.

1. Your first task is to understand how to make web sites and web pages *visible* to web search engines. (Re)Search on the web to find out on how search engines crawl and rank web pages.

   Find out the elements necessary to optimise a web page, in terms of its design and structure, so that it will appear in search engine result listings (SERPS), particularly Google and Bing. The following page is a good start, but do try to find some additional information too:

   http://www.searchenginewatch.com/showPage.html?page=2167961

2. Using the information found during your research (1), plan the design, structure and content of your home page. Your aim is to ensure that Google or Bing return your web site in as high as possible in their listings when searched with the keywords:

   <yourfirstname> <yourlastname> MSc (or BSc if appropriate)

   Before you begin you may want to refresh your memory on the basics of HTML and Web page design: http://www.w3schools.com/html/ and http://www.htmlcodetutorial.com/ may be useful for this.

3. Next, create your own personal home page to be published on the DCSIS's web site. You can use any text/html/web editor for this purpose, e.g. Notepad, TextPad or other text editor. Your page can be as simple or as complex as you choose, but decoration will not gain additional marks. Save your page as **index.html**.

4. Create a separate page, linked from your home page, optimised for the search phrase:

   search engine optimisation dynamic content

   These are common terms when searched for via Google or Bing, but we want you to try to have your page ranked. Therefore, please use any and all *above-board* techniques that you have found out about to achieve a high ranking.

5. Publish your website: to do this, create a folder called **public_www** in your **H: drive** and save all your website files into it. Your web site should now be viewable at:

   http://titan.dcs.bbk.ac.uk/~<your username>

   Where <your_username> is replaced with your DCSIS username.

   If you get a *Forbidden* message when trying to view your pages then you will need to contact Systems Group to allow your pages to be read by all users. Systems Group can be found in room MAL261 or contacted at http://www.dcs.bbk.ac.uk/staff/staffgroup.php?grp=4 or by email at sg@dcs.bbk.ac.uk.

6. To make your page visible, as soon as the site is *complete* and *live* (and you *have CHECKED* that it is), send a message to Martin O'Shea with the URL. A link containing the URL will then be added to page http://www.dcs.bbk.ac.uk/~martin making your pages accessible from the internet.

7. Check Google or Bing with the two queries above and when your pages appear, send other messages to Martin O'Shea on Moodle with the following details:

   a. The name of the search engine(s) on which it appears.
   b. The ranking (1st, 2nd, 3rd, etc.) of your pages in the results list for each of the two queries.

8. The final part of this lab requires you to pick up and display, i.e. *syndicate*, dynamic content from two different data sources on the internet. You are free to use two RSS feeds from (a), or one RSS feed from (a) and another data source satisfying the requirements of (b), below:

   a. Firstly, RSS ('Really simple syndication' or 'Rich site summary') feeds provide an open method of making website content machine-readable and easily sharable, i.e. RSS *syndicates* website content.

RSS feeds most commonly consists of frequently updated works such as blog entries, news headlines, audio and video media and HTML

More information is available at:

- http://blogs.law.harvard.edu/tech/rss (on the RSS v2.0 Specification).
- http://www.faganfinder.com/search/rss.shtml (on RSS in general).

Secondly, add a new page to your website that includes the content syndicated from at least one RSS feed of your choice. There are several ways to do this – you could try one of the following or another tool:

- Use the JavaScript RSS Box Viewer at http://p3k.org/rss/ to create a script to include on your web page.
- Use FeedWind at http://feed.mikle.com/en/?gclid=CMCOjPbrhKUCFQNY2godQ14IPw

b. Many people or organisations maintain accounts, or post content, to social networks like Twitter, Google+, Facebook or other web services. So we would like to find out about the APIs (Application programmable interfaces) for one of these, and use it to display their content on a new page on your web sites.

More information is available at:

- https://dev.twitter.com/docs/embedded-tweets
- https://developers.google.com/+/api/latest/activities/list#examples
- https://developers.google.com/youtube/player_parameters#Embedding_a_Player

NOTE: For this part of the assignment, it may be that not all services will work in all browsers and some RSS links on pages may only work when served by a web server. It is also possible that some of the above will require use of Javascript or accounts with the social network providers concerned.

It is best to try your pages from lab PCs at the college.

What to hand in:

1. Notify Martin O'Shea by email (martin@dcs.bbk.ac.uk) with the URL link to your home page, as soon as the page is live (6).
2. A further message(s) as soon as your pages appear in the Google or Bing results (7).
3. A short (no more than two A4 pages) report in `.doc(x)` or `.pdf` format. The report should outline the search engine optimisation techniques you used to make your pages rank highly for (4) above, and with reference to your choice for (8) above, describe potential problems and possible solutions of aggregating content from several web services into a single display. Illustrate your points with an example.

Submission deadline:

1. The report by 15 10 2015, to be submitted via Moodle using the **Lab 1: Search engine optimisation and syndicating dynamic content** drop box.
2. E-mail notifications of (1) and (2) when appropriate.

Late assignments: No extensions are available as for this lab and any late submissions will be graded as per the guidelines of the relevant course being studied.