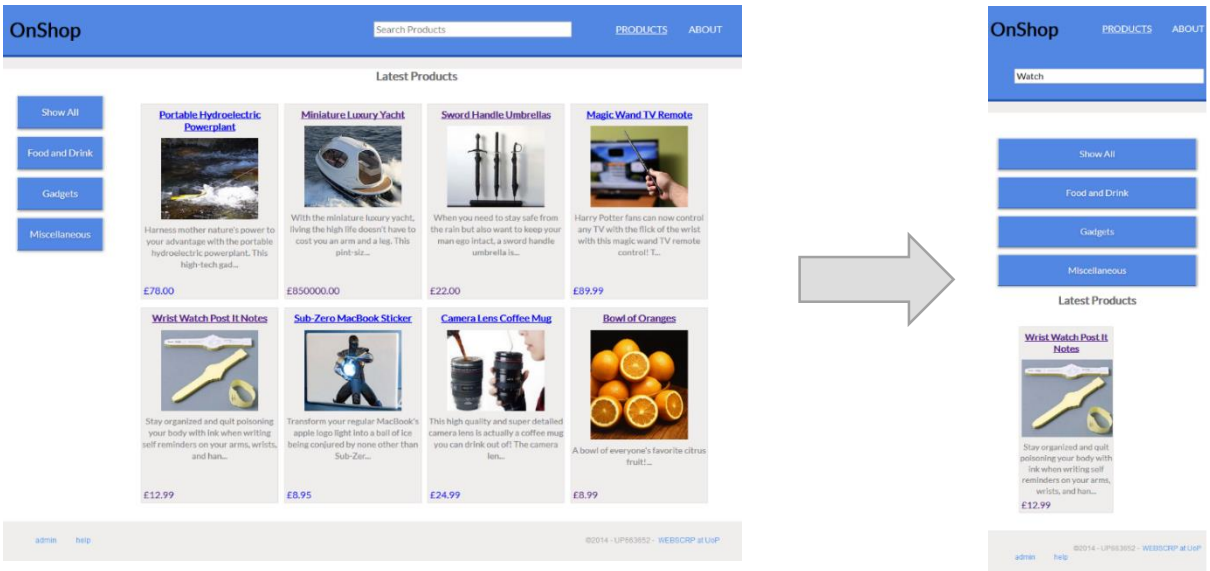
WEBSCRP – INTERIM TWO

Technical Achievement and Project Progress by 663652

Technical Achievements

Shown below are some of the highlights of the working functionality of the project, as of 27/01/2014.

- Latest Products Homepage
  - The homepage JavaScript fetches a JSON object of products in the database through an XHR2 call to a PHP page driven by mysqli. This object is then parsed and styled, resulting in a grid of products in order of newest first.
- Individual Product Pages
  - Selecting a product causes the inner HTML of the page to be replaced with more information for that specific product; without any page reload. This also utilises XHR2 with a JSON object.
- Adding Products & Categories
  - New products & categories can be added through the admin section, which sends the form data and any image provided to the server using an XHR2 FormData object. The PHP on the server then uses prepared mysqli statements to add these to the database. The MySQL database uses auto incrementing product/category IDs.
- Product Images
  - Products have images, which can be provided when adding a product (or left blank, and a placeholder image used automatically instead). PHP saves the image to the server with the relevant ID, and inserts a reference to the image location in the database.
- Live Product Search
  - Products on the homepage are filtered as the user types into the search box. This uses the keydown JavaScript event to search through the products array and present matches.
- Category Filtering
  - All categories in the database are displayed along the left of the products page. Selecting a category filters the products shown to only those in that category.
- Responsive CSS
  - When the device width is below a certain number of pixels (using media queries), the CSS adjusts the sizes of certain elements. This still requires more tuning.



Project Progress

Overall progress in this project has been good, and development has largely followed a cyclic pattern as expected; with fairly rapid iterations of planning, development, prototyping, implementation, and testing for each feature. This process has occurred often on the same aspects, as I try to refactor or extend elements based on new course material or research.

The project is currently on schedule, with nearly all of the specification functionality implemented, the only exception being updating product details which is currently being developed. The task to generate demonstration products was brought forward from near the end of the project to one of the initial tasks – so to allow testing of pages and the database interactions as they were developed. The task to enable project searching has also been completed ahead of order – due to being able to implement it alongside another feature in the JavaScript.

Several of the early tasks took longer than expected due to the extent of technologies I had no experience with; AJAX & DHTML. However, after research and exercises implementing this in separate areas, the process is now smooth enough to apply AJAX, with EventListeners attached to different areas of the DOM, in additional pages without much additional delay.

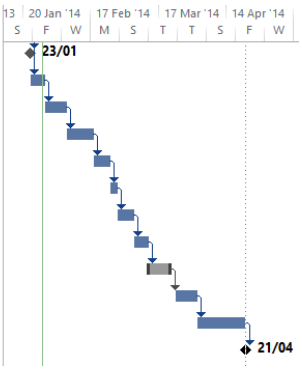
There was a break in schedule over Christmas, where less work was completed than planned. Increased time was allocated before and after Christmas to reduce the impact of this. The graph alongside shows the rate of code additions to the Git repository, in 100s of lines.

Key lessons learnt so far would include: allowing more time to research new technologies, better scheduling around busy dates, and scheduling time to work specifically on prototyping. A non-scheduling lesson would be the importance of separating different languages as much as possible in development. Code duplication and mixed technologies can lead to inconsistencies and difficulty tracking down errors. Git has proved an invaluable development tool for monitoring progress, as well as managing and reverting changes.

Gantt Chart

Given the change of order in some areas of the plan, and more knowledge of the additional features required; the second half of the plan has changed considerably.

Task Name	Duration	Start	Finish
Interim Two	0 days	Thu 23/01/14	Thu 23/01/14
Improve dynamic product info page	4 days	Thu 23/01/14	Tue 28/01/14
Add product sorting and pagination	7 days	Wed 29/01/14	Thu 06/02/14
Implement product basket	7 days	Fri 07/02/14	Mon 17/02/14
Create ordering process	5 days	Tue 18/02/14	Mon 24/02/14
Give live feedback on product availability	3 days	Tue 25/02/14	Thu 27/02/14
Pages for updating products	5 days	Fri 28/02/14	Thu 06/03/14
Pages to generate order statistics	4 days	Fri 07/03/14	Wed 12/03/14
Build Installation scripts & sample entries	7 days	Thu 13/03/14	Fri 21/03/14
Create Documentation	7 days	Mon 24/03/14	Tue 01/04/14
Test/Extend Functionality	14 days	Wed 02/04/14	Mon 21/04/14
Final Submission	0 days	Mon 21/04/14	Mon 21/04/14



If progress continues ahead of schedule, additional features I wish to research include: keyboard navigation, improved accessibility, E-Tag generation, internationalisation support, and the possible use of HTTP PUT/PATCH.