University of St Andrews School of Computer Science

CS2003 — Internet and the Web — 2020/21

Tutorial 2: Web programming: HTML and CSS
Date: Week 5: 15-16 Oct 2020

1. The Web Computational Model
   a) How does the addition of computation on the server side and client side alter Sir Tim Berners Lee's original computational model?
   b) We are going to use JavaScript on the server side and the client side, But what might a Web server look like if written in Java. Sketch out a server or even fully write one.
   c) It is relatively easy to write a Web server in any language. The use of different languages on the client side is more constrained why is this?
   d) Why are the language features of JavaScript especially well-suited to client side programming?

2. Simple Examples - `node-01`
   a) Script 03-variables.js does not produce output. Modify it so that all the variables that are defined in the script are displayed.
   b) Script 06-functions.js has output that might be considered 'surprising', for the lines marked "(look at the code!)". What is surprising? Explain what is happening in the code, and why it is a useful feature, potentially, as well as why you should be cautious in its use. How could the code be changed so that the 'correct' answer is given?
   c) Script 09-csv_files.js has a function called compare_uid(). Describe how this function works with the sort() function. How would you change the function to reverse the sort order? How would you change the code to sort according to the surname?

3. Finally, make sure that you have registered on the PeerWise system following the instructions in the separate handout. Create one question covering the topics from week 4, and tag this question with the tag "week-4". You should also try to answer at least one question with the same tag. Your tutor will pick a question at random during the tutorial and you can go through it together as a tutorial group.