

COMP5830 An Introduction to Programming and Web Technologies

Assessment 2 - Simple web pages (HTML, CSS, and JavaScript)

You should write complete and valid HTML5 documents for each of the questions below. You may seek general help from wherever you like, but the work you submit **must be your own**. We will run checks on all submitted work in an effort to identify possible breaches of this rule, and take disciplinary action against anyone found to have committed plagiarism.

Further advice on plagiarism and collaboration is available at this link:

<https://www.cs.kent.ac.uk/students/plagiarism-faq.html>

To submit your answers, please submit a single ZIP file containing all your files. For each question, create separate HTML files with .html extension, named “questionX.html” where X is the number of the question. If you create any subsidiary CSS or JS files then these should be submitted as well. Every HTML file should have a complete and valid HTML5 structure (I recommend checking your code with the W3C Validator). Marks will be deducted for every invalid piece of HTML5, up to a maximum of 5 deductions per questions.

You may re-submit your work as often as you like, but only the last submission will be kept and marked.

Question 1 [10 marks]

The aim of this question is to create a page containing four buttons. The buttons should be created using dividers (<div>). The buttons should:

- Have styling such that it is clear to the user they are buttons which can be clicked, e.g., by varying the style when “hovering”;
- Use colours which are not one of the 140 named CSS colours;
- When clicked, should be links to each of the other questions in this assignment, e.g. question1.html etc; (up to question 4).
- Be positioned on the same line.

Question 2 [40 marks]

Part a). [15 marks]

Create a web page that contains a table presenting the following information, with headings: Name, First appeared, Paradigm, Link.

Some widely used programming languages

Name: C, First appeared: 1972, Paradigm: Imperative

Link: [https://en.wikipedia.org/wiki/C_\(programming_language\)](https://en.wikipedia.org/wiki/C_(programming_language))

Name: Java, First appeared: 1995, Paradigm: Object-oriented

Link: [https://en.wikipedia.org/wiki/Java_\(programming_language\)](https://en.wikipedia.org/wiki/Java_(programming_language))

Name: C++, First appeared: 1983, Paradigm: Object-oriented

Link: <https://en.wikipedia.org/wiki/C%2B%2B>

Name: Ruby, First appeared: 1995, Paradigm: Object-oriented, Dynamic

Link: [https://en.wikipedia.org/wiki/Ruby_\(programming_language\)](https://en.wikipedia.org/wiki/Ruby_(programming_language))

Name: Python, First appeared: 1991, Paradigm: Object-oriented, Dynamic,

Link: [https://en.wikipedia.org/wiki/Python_\(programming_language\)](https://en.wikipedia.org/wiki/Python_(programming_language))

Name: JavaScript, First appeared: 1995, Paradigm: Object-oriented, Scripting

Link: <https://en.wikipedia.org/wiki/JavaScript>

Name: Haskell, First appeared: 1991, Paradigm: Functional,

Link: [https://en.wikipedia.org/wiki/Haskell_\(programming_language\)](https://en.wikipedia.org/wiki/Haskell_(programming_language))

The table should:

- Be styled such that the headings are easily distinguished from the main data;
- Have a font other than the default;
- Have actual links for each Wikipedia page, i.e. the user can click to visit them;
- Be styled with borders around at least the data cells.

Any specific styles, colours, and fonts are up to you.

Part b). [25 marks]

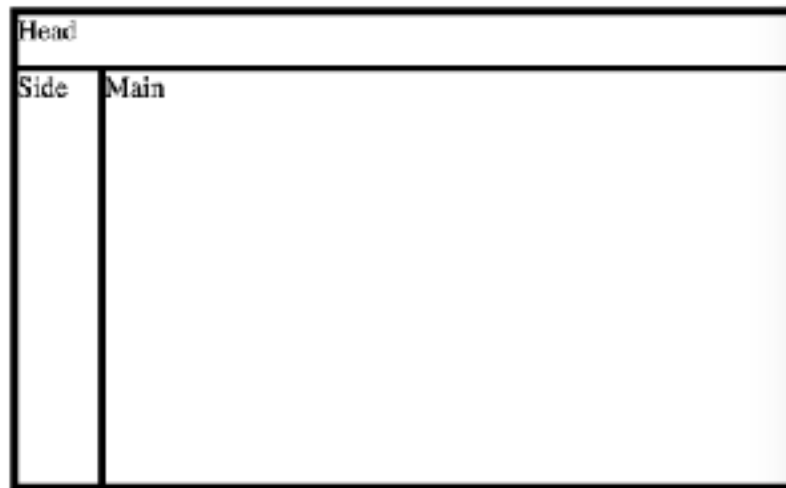
Implement some JavaScript code that allows each row of the table to be selected by clicking anywhere on it, changing the styling once a row has been clicked to indicate to the user that it has been selected. The choice of style change is up to you.

Once a row is selected, it should be de-selectable by clicking anywhere on it again, resetting the style to how it looked previously.

If a row has been selected, make a “Delete” button appear below the table which when clicked removes the selected row from the table. After deletion, the delete button should itself disappear, reappearing next time another row is selected.

Question 3 [25 marks]

Create a web page that acts a simple Facebook-profile-like page for anyone (fact or fiction), i.e., containing a photo, some basic information. This web page should use a three-panel layout with a header, sidebar, and main content, e.g. with the shape:



- The head should provide the subject's name;
- The side should contain some relevant links and/or a list of some core information;
- The main panel should include an image and some information;
- The layout should be scalable, i.e., the width and height of the main components should not use absolute measurements;
- The above shape should be followed, but you don't need to have large black borders between the different parts of the page, and you need not follow the exact proportions above (e.g., your side bar could be wider).

Question 4 [25 marks]

Create a page showing the sentence:

The quick brown fox jumps over the lazy dog

Each word should be clickable. When a user clicks on a word it should be coloured red and swapped with the word to its right. For example, if the user clicks on “jump” above, the result should be:

The quick brown fox over **jumps** the lazy dog

If the user clicks the last word it should be swapped with the first word of the sentence. Implement this functionality using JavaScript.