5CCS2INS – Internet Systems
Coursework 3: HTML, XML and Javascript

The objective of this coursework is to improve your learning about HTML, XML and Javascript. This coursework will be marked and it counts 13.33% of the final mark for this module.

Task

You'll work with XML data representing the total number of COVID-19 cases in the UK, the total number of tests, the test capacity, and patients in hospital.
The data is stored in the following files:

- Total number of daily cases (cases.xml)
- Total number of tests and test capacity (testing.xml)
- Total number of patients in hospital (hospital.xml)

You have data about the daily number of new cases (`newCasesByPublishDate`), daily virus tests processed (`newPCRTestsByPublishDate`), daily virus testing capacity (`plannedPCRCapacityByPublishDate`) and count of patients in hospital (`hospitalCases`).

The end product of this coursework should be an HTML page where the users can query information about the situation of COVID-19 in the UK. The results should be displayed on the same page where the query is performed. You should use JavaScript and HTML forms to implement the solution and it should work in both Firefox and Chrome. You'll need knowledge from weeks 6 and 7 to complete this coursework.

The elements of this coursework are:

1. Create a web page with several fields for user input as well an area for the output of the results, which should be displayed in the same page. The output table should have a column for date/month, cases, tests, test capacity and patients in hospital. The page also should have a button which when clicked the table should be filled with the appropriate results. Upon reloading the page, the form and output should be cleared.
2. By means of a drop-down list, the user should be able to select a whole month they wish to query and if they want daily data, monthly total or daily average. If the querying button is clicked with no further restrictions being entered into the form by the user, then all months should be displayed.
3. As another option the user should be able to enter a date (e.g. 28/10/2020) as well as one of the conditions 'equals', 'greater than' or 'less than'. So, if the user enters the and 'equals' for the condition, only the data for the 28/10/2020 is displayed. If the user enters the condition 'greater than' all the subsequent dates will also be displayed. In the case of 'less than', all the the precedent dates will be displayed.
4. For all the types of queries (month-based or date-based) the user should also be able to select "top 10" for one category (cases, tests, test capacity and patients in hospital) in which case only the highest top 10 entries on that category (on a given

month or date if selected or at any point if no month is selected) will be displayed on the output table.

Deadline

The deadline is 27/11/2020 4:00 pm(UK time). Please submit it via KEATS as a SINGLE zip file containing a SINGLE HTML file, along with any Javascript files you need. Please do not submit any instructions, the web page should be self-explanatory. Comment your code appropriately.

Your code will be checked against plagiarism and collusion, so make sure you only submit your original work (except where explicitly stated otherwise).

Form

We'll evaluate your code structure and comments, how clear and self-explanatory the user interface is and how you handle errors in the code. Markings will be awarded out of 100 as detailed below:

- User interface – 10%
- Code structure and documentation – 20%
- Error handling – 10%
- Part 1 – 15%
- Part 2 – 15%
- Part 3 – 15%
- Part 4 – 15%