Faculty of Science

Course:	CSCI 3230U: Web Application Development
Semester:	Winter 2018
Course component:	Midterm lab exam

Instructions

This lab exam is to be completed and submitted to Blackboard before the lecture period has finished. You are permitted to use any files (including PDFs, e-books, source code) that you already have stored on your laptop. In addition, you will also be permitted to access the Bootstrap and jQuery documentation:

- https://getbootstrap.com/docs/4.0/getting-started/introduction/
- https://api.jquery.com/

Any communication with another person (aside from the invigilators) is prohibited, as is the use of a file sharing tool (e.g. Google Drive), or web search.

Overview

This lab exam involves the creation of a web page (quiz.html specifically, containing an HTML table, an empty list, and a few buttons) that will allow dynamic manipulation of the data in the list and the table, based on data obtained from another web site. The web page implements a basic quiz. The HTML and CSS files for this example have been provided, along with an empty JavaScript file. It is your job to add the code to the JavaScript file. Only this JavaScript file will be submitted for this lab exam.

Note: Do not make any modifications to the HTML, the CSS, or the JSON file.

Note: All of the styling requests is available in Bootstrap. It is not required that you do any additional CSS by hand.

Detailed Requirements

Initial State

The table and 'Next' button should be hidden, initially. No data has been loaded at this point. Only the 'Begin' button should be visible at this point, as shown in figure 1, below.
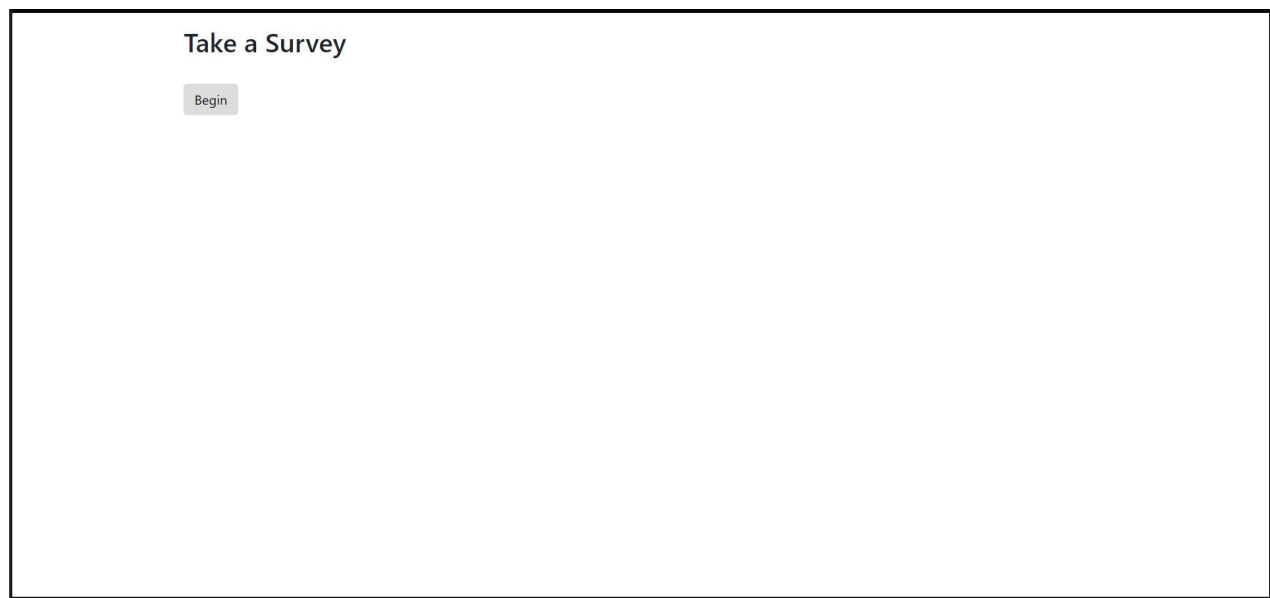
Figure 1 – The initial state of our quiz application

The Begin Button

When this button is clicked, the data for our quiz will be loaded from the following URL:

- http://csundergrad.science.uoit.ca/courses/csci3230u/mtle/quiz_questions.json

Once the quiz data has been loaded, the first question will be displayed. The 'Begin' button will be hidden, and the 'Next' button will be displayed, along with the results table. The results table will initially have only a header row, as indicated in Figure 2, below.

Figure 2 – Our quiz application showing the first question

The quiz title, and question text, will be added to their respective DOM elements. A set of answers will be generated in a Bootstrap list, as indicated in Figure 2. This will not be a list, but in fact a set of 'a' elements

with the proper CSS class to be styled as a Bootstrap list. If the user clicks on one of the list items, its value will be stored in a variable and its CSS class will be modified to highlight it in light blue, as shown in figure 3, below.

Figure 3 – Our quiz application showing a highlighted answer

The Next Button

When the 'Next' button is clicked, the selected answer will be compared to the correct answer (which can be found in the quiz data). The results table will then be updated to include the question #, the question text, the user's answer, and the correct answer. Furthermore, the CSS class of the new table row will be set accordingly to make the answer red if the answer was incorrect, and green if the answer was correct. A sample results table, showing both correct and incorrect answers, is shown in figure 4, below.

Figure 4 – Our quiz application showing both correct and incorrect answers

Once the table has been updated, the question text and answers will be updated to those of the next question. If the last question is being displayed, the 'Next' button should be hidden, as it is in figure 4 above.

How to Submit

Once you have finished, or once the midterm period is ending, the `quiz.js` file (and no other files) should be submitted to Blackboard, using the drop box for this lab exam.

Note: *Please do not use .rar or .7z formats for your submission.*