

CIS 3344 Lab 4 – JavaScript

The goal of this assignment is to give you more experience working with JavaScript for form validation and dynamic displays. In this assignment, you will build a web application that allows the user to build a quiz and take a previously created quiz.

Requirements:

1. Create an HTML page with a form to allow the user to create a quiz.
 - a. Allow the user to enter a title and description for the quiz that will appear at the top of the quiz when someone is taking the quiz.
 - b. Allow the user to add questions to the quiz.
 - i. The user should be able to select a question type (true/false, multiple-choice, or fill-in-the-blank). Based on the type of question, generate the HTML content to allow the user to enter the question text, answers, and choose the correct answer.
 - For example, a multiple-choice question will require you to generate the HTML content to allow the user to add as many possible answer choices as they want, but only one will be the correct answer.
 - ii. Allow the user to select/enter the correct answer.
 - iii. Allow the user to enter the point value for the question.
 - c. The questions need to be added to a list of questions for a quiz.
 - d. A quiz must be added to a list of quizzes.
 - e. Use input validation to validate the form before creating the question.
2. Create an HTML page that allows the user to take a quiz that was previously stored.
 - a. This page should allow the user to choose a quiz and generate the HTML content based on the selected quiz and its questions.
 - b. After submitting the quiz, the application should grade the quiz and display the results.
 - c. The quiz results should display the numerical grade as a percentage (%) the person earned along with each question, the user's answer, whether the user's answer was correct or incorrect, and the correct answer to the question.
 - d. You will need to put thought into the design and structure of this display. I do not want a simple string with all the information thrown into a div or span. I expect effort put into making the displayed results for each question look professional and presentable.
3. You must design a class(es) to represent a quiz and quiz question objects.
 - a. This class should contain methods to get/set the data for each quiz and quiz question.
 - b. This application will use objects of these class for all operations.
 - c. The application must have a list of quizzes that it uses.
4. Store the quizzes in local storage, so they are available for later use.

5. Create a setup function that sets up and stores 2 - 3 quizzes in the local storage.
 - a. This is needed because anyone else that uses this application will not have the quizzes you created and stored in local storage on your computer. Therefore, you need to have some setup function to store some pre-made quizzes that can be used by the application.
6. Use CSS to style the page and make it look professional and attractive.
 - a. The display of the quiz, the quiz questions, and the results should be presentable and well thought out. You should put effort into the design and structure used to display this information.
 - b. Be sure to include a navigation system or some way to allow the user to navigate the pages of this site.
7. Extra Credit:
 - a. Allow the user to be able to take the quiz one question at a time or all at once.
 - b. Allow the user to add a multiple answer question type that is like multiple-choice except it allows there to be multiple correct answers for a question. You will also need to account for partial credit based on the question's point value.
8. Remember to add a section to the labs.html page created in Lab 1 for this lab.
 - a. Include a description of what you learned, what elements you liked/disliked, and a link to the page you created for Lab 4.

Submission:

You need to publish your Web site to the cis-iis2 Web server, upload your code as a zip file containing your entire Web site to Canvas, and provide the URL to your home page. Make sure a current version of your Web site along with a backup copy is located in your G:\cis3344 folder. Assignments that are not submitted properly will not be graded.

The grade for the required elements is based on the published version of your Web site. This means the elements must work from the published Web site, not just the files submitted through Canvas. It's important to make sure your published Web site is the current version and that everything works. You should not publish to the Web server after the assignment has been submitted. Otherwise, it will be considered late or may not be accepted when it's passed the deadline. If you make changes to your Web site, you will need to republish and resubmit the project. Generally, you shouldn't publish or make changes until after you receive a grade.

You need to zip the entire Web site folder into a single zip file and submit the assignment in Canvas. To submit the assignment, you need to click the Assignment's Title "**Lab 4**" to view the submission form and upload the file.

Make sure you properly submit your assignment and that it works. Programs that don't run or don't contain all the necessary files will not be graded and marked late.