

Computer Science 266 Introduction To Web Programming

Journal Entry JavaScript Reflection

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Form Validation

A simple demonstration is shown in Figure 1, whereby the user has left a field blank, and the form rather than being submitted prompts the user to ensure that all fields have in fact been filled out.

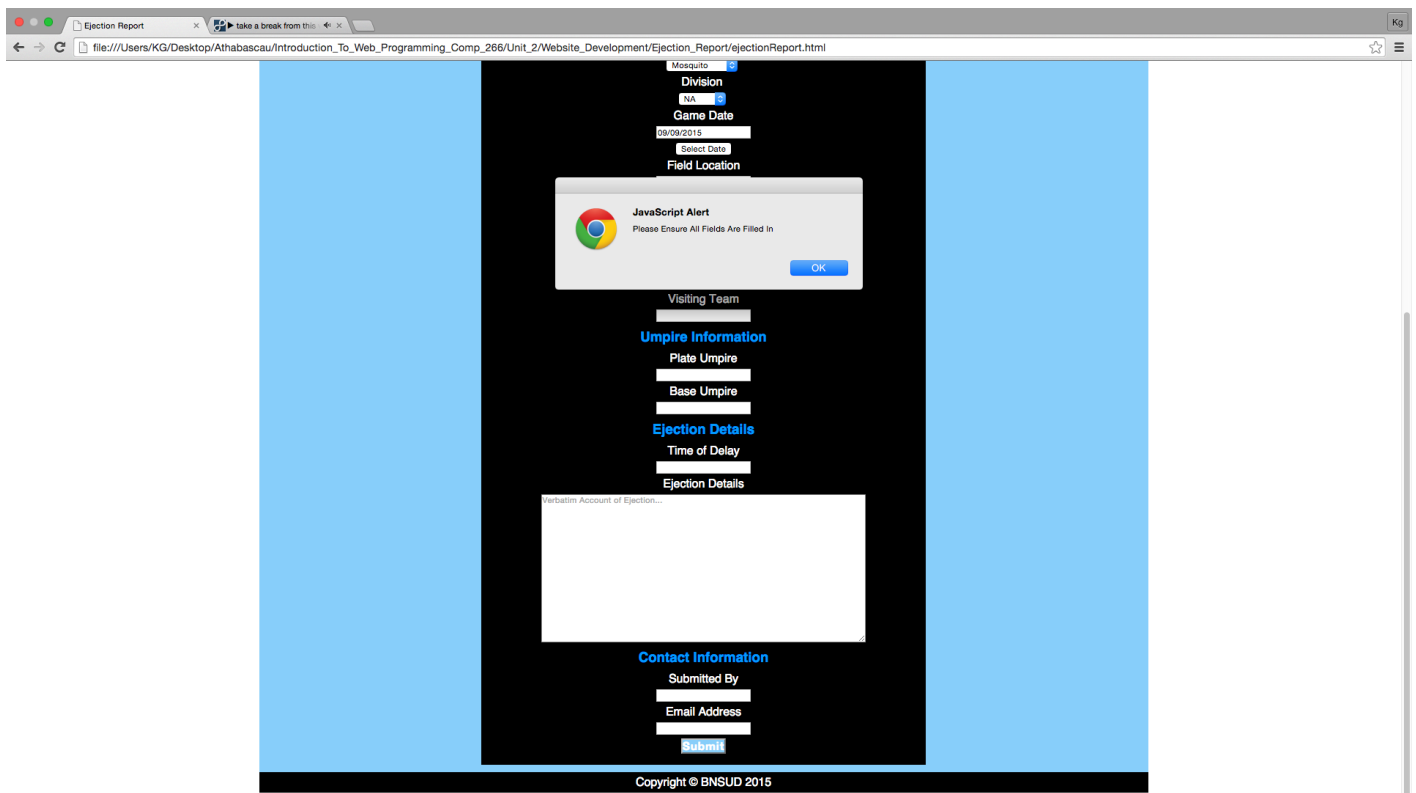


Figure 1: Showing the form validation requirement and subsequent message alerting user to ensure that all fields have been filled out.

Adding this feature to our web page greatly diminishes the chances of user error, that is the chances of a user accidentally submitting any on of our three reports without filling out all of the required fields.

Quiz Validation

Ensuring that the user has entered an answer for each question of the quiz greatly decreases the possibility of the user failing the quiz in the case that the quiz mark would be required for some type of accreditation. Having the actual number of the question which the user did not answer displayed greatly decreases the time required by the user to find and answer the question (s)he has left blank, in comparison to simply telling the user they have forgotten to answer a question. A demonstration is given via Figure 2 below.

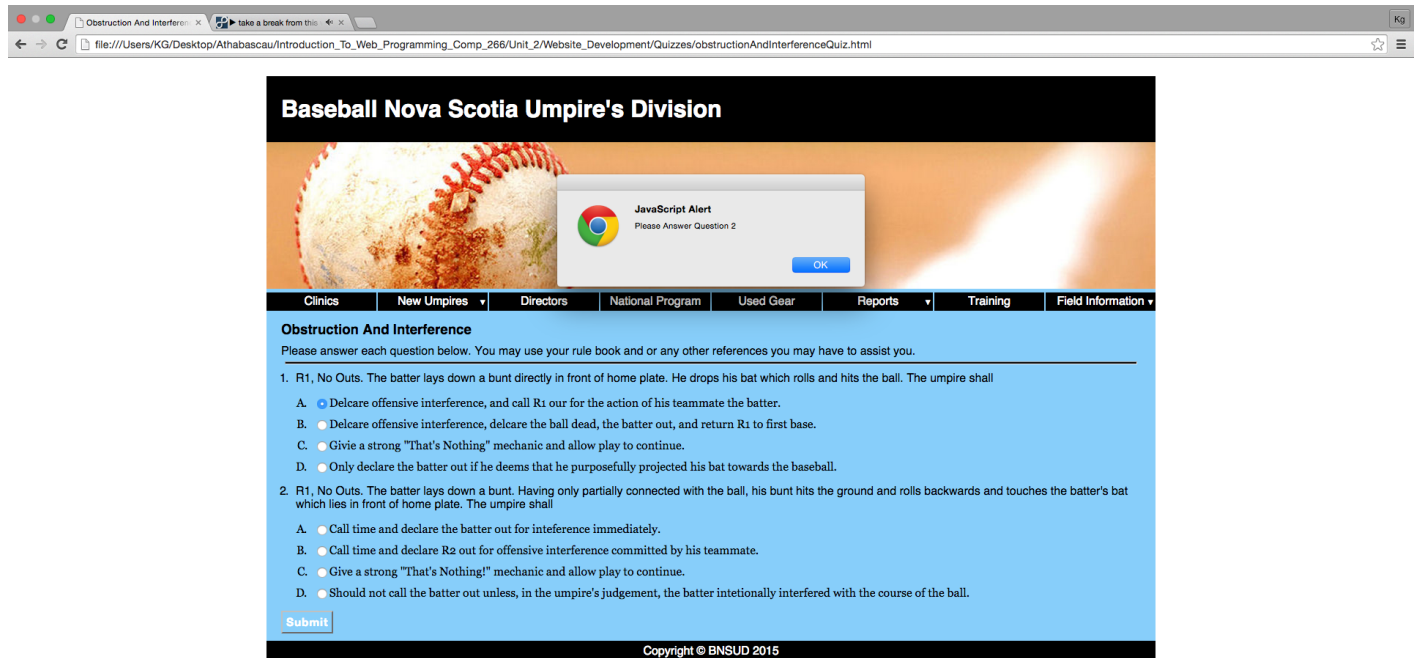


Figure 2: Showing the prompt for a user to select an answer for each question.

Marking Quiz

As previously discussed the majority of our JavaScript programming is devoted to the actual marking of the quiz, with multiple integral parts working together. A demonstration of these features are displayed via Figure 3 below.

Baseball Nova Scotia Umpire's Division

Obstruction And Interference
Your Score: 50%
Correct Answers Are Displayed In Green.
Incorrect Answers Are Displayed In Red.

1. R1, No Outs. The batter lays down a bunt directly in front of home plate. He drops his bat which rolls and hits the ball. The umpire shall

- A. Delclare offensive interference, and call R1 our for the action of his teammate the batter.
- B. Delclare offensive interference, delclare the ball dead, the batter out, and return R1 to first base.
- C. Givie a strong "That's Nothing" mechanic and allow play to continue.
- D. Only declare the batter out if he deems that he purposefully projected his bat towards the baseball.

Here shall be the explanation of question 1.

2. R1, No Outs. The batter lays down a bunt. Having only partially connected with the ball, his bunt hits the ground and rolls backwards and touches the batter's bat which lies in front of home plate. The umpire shall

- A. Call time and declare the batter out for inteference immediately.
- B. Call time and declare R2 out for offensive interference committed by his teammate.
- C. Give a strong "That's Nothing!" mechanic and allow play to continue.
- D. Should not call the batter out unless, in the umpire's judgement, the batter intentionally interfered with the course of the ball.

Submit

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Figure 3: Showing how the user's grade is displayed in addition to correct answers begin displayed with a green background and the incorrect answers being displayed with a red background. Lastly, the questions which the users have answered incorrectly provide an answer for learning purposes.

Firstly having the user's score displayed at the top of the page gives the user immediate feed back with regards to their performance. Highlighting the background of question with correct, and possible user selected incorrect answers, allows the user to easily identify problem areas, and compare the correct answers to questions with their chosen answers should the two differ.

Lastly, showing the user the explanation behind the correct answer to a question should they have entered the wrong answer allows the user to actually *learn* something from our quiz, rather than simply be told that their answer is incorrect. Choosing to outline this content with a solid black line allows for easier readable, and clearly defines an area for the user to refer to when looking for an answer.

Form Submission Confirmation

An example of this functionality is shown in Figure 4 below. The benefit of having a page confirmation the submission of form is that it makes the user experience much more dynamic and immersive. That is, the user knows that their work in creating a report has not been in vein, and instead that the contents of the form have been passed on to the system administrator for further processing.



Figure 4: Showing the user that their form has been successfully submitted.

Personas And Scenarios

David

At current David does not benefit from the implemented JavaScript features, as he is not filling out any type of report, nor is he completing any quizzes and subsequently requiring marking. However, should David indeed become an umpire as he wishes to do then he will make great use of the Training Section, as being a new umpire there will be a large amount of useful information on this page that could potentially accelerate his training.

Ricky

Ricky may now use the materials provided within the training section to further his rules knowledge. Specifically, with the quiz section now being interactive he may determine where his strengths and weaknesses lie. Furthermore, upon completion of each quiz should he get an answer wrong, he may view the provided text allowing him to learn from his mistake online so that he does not repeat this mistake in a real life scenario.

Kevin

The updates to both the training and reports section provide no enhanced experience to neither Kevin nor his son. However, much like David, should Kevin's son become an umpire as Kevin desires he too could make use of the training section both to increase his rule knowledge as an umpire, but also to increase his rule knowledge to become a smarter player.

Robert

Robert greatly benefits from the new JavaScript features involving the Coach's Report beneath our Reports section. Ensuring that all fields are indeed filled in ensures that Robert does not send a partially filled out report. In addition, the redirection to a confirmation page when the report has been submitted provides visual feedback that Robert's efforts have not been in vain, and that his comments have been passed on to those in higher ranks for appropriate action and or congratulations.

Lisa

Unfortunately Lisa does not benefit from the update of the Reports Section, nor from the increased interactive experience as a result of JavaScript implementation upon our quizzes.

Learning JavaScript

Learning the syntax of JavaScript was not too difficult, as the syntax of JavaScript is much the same as Java. Furthermore, the use of what appears to be very well thought out syntax such as the *document.getElementById()* or *document.getElementsByClassName()* makes it very easy to locate and update various elements as required. The *alert()* function could not be any easier to use, and allows for quick and dirty debugging. We simply set the alert function and should the code be executed as desired we should reach the alert function without issue, with the opposite also being true. Thus, it is very easy to determine where the code is breaking down should errors being incurred. We also made use of the extremely useful *innerHTML* attribute to update the actual HTML on our web page's. Lastly, we even made use of requiring multiple conditions be met, mainly the case where the user has not selected the correct answer for a question within our quiz, before displaying objects such as the solutions to questions. Without a doubt, the use of JavaScript is an integral part of web development and we have only merely stached the surface of its many capabilities.