

Javascript Assignment

by Scott Mainwaring

FILE	4097_SCOTT_MAINWARING_JAVASCRIPT_ASSIGNMENT_109697_1351885888.DOCX		
TIME SUBMITTED	13-MAY-2018 04:16PM (UTC+0100)	WORD COUNT	900
SUBMISSION ID	89074941	CHARACTER COUNT	4513

Javascript Introduction Assignment

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Module: Javascript

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Section 1: Introduction

This report for the module 'Introduction to Scripting' will contain documented information on how the author designed and created a website from scratch, using only HTML, CSS and most importantly JavaScript. This report will contain proof of JavaScript use by providing annotated screenshots and will also contain the methodology behind the adding of the JavaScript. The website created for this assignment is based around the country Brazil and the world famous sport, football. The purpose of the creation of this website was to allow football enthusiasts to have some fun but to also test their football knowledge by allowing them to take part in a quiz and since the website is based around Brazil the questions asked will be based around Brazil. The target audience for the website is anywhere from three years of age and right up until 100+, as long as you're a football enthusiast you'll enjoy a good football quiz.

Section 2: Website Design

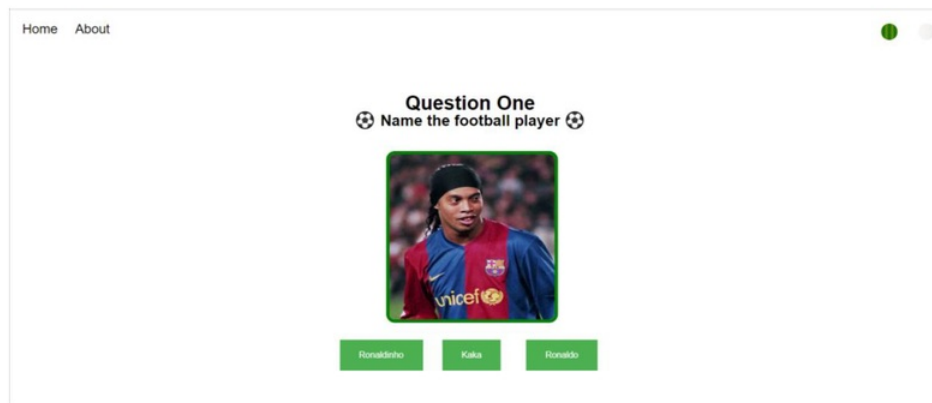
The default website colour scheme is a clean white background for simplicity and green to represent the colours of Brazil. However, there is a feature on the website that allows you to change the theme of the website using some JavaScript functions. The website is made up of two sections; these sections are the header which contains the navigation and theme changing options, and the main body section which will contain all the quiz content.





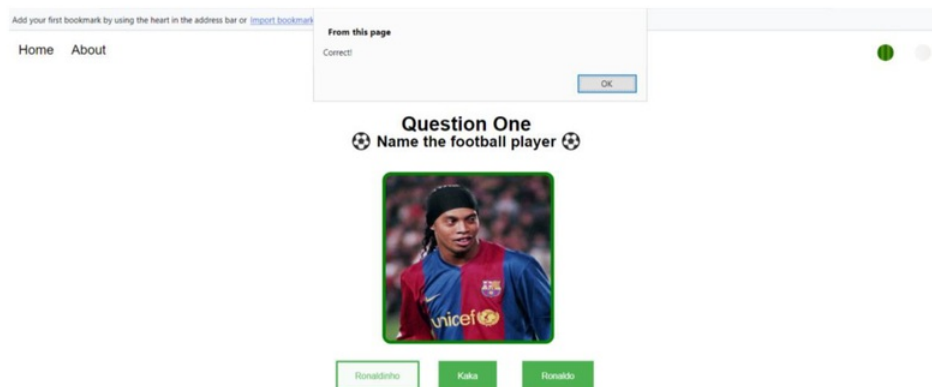
When the 'Play' button is pressed, a loading bar will appear underneath the image of the map of Brazil. Once the loading bar reaches it's limit a message will appear at the top of the screen showing who created the quiz, once the 'Okay' button has been clicked on the message the website will then take you to the start of the quiz. Images of this are shown below:





Above is an image of the start of the quiz. The layout for all the questions will be the same. The user is asked to name the footballer that has been presented on the screen, they will then have the choice of three footballers to choose from. If they pick the wrong answer an alert at the top of the page will let them know that the answer is incorrect and if the question is answered correctly an alert will also appear letting the user know that they answered correctly. Once the 'Okay' button has been clicked on the alert the website will then take the user to the next question. There are five questions to be answered but this can easily be expanded on.





Section 3: JavaScript

Here is the JavaScript behind the website functions. Below is an annotated image of the JavaScript used for the website's theme changer. This is simply done by calling an element by its ID which in this case the 'stylesheet' for the website is being called. The code used for this is 'document.getElementById('stylesheet')' but because the file is in a different location, to call the element the directory of the file needs to be input. '.href = url;' is used at the end of the getElementById. This is then called through the function 'changeStyle(url)'.

```
<!-- Stylesheet changer -->
<script type="text/javascript">
  function changeStyle(url) {
    document.getElementById('stylesheet').href = url; //This searches for the URL of the stylesheet
  }
```

```
<link id="stylesheet" rel="stylesheet" href="css/style.css">
```

To call this function 'onclick' is used in the code of the button. This will then call the function 'changeStyle' and as seen below, each 'changeStyle' function has two different stylesheets with the location.

```
onclick="changeStyle('css/style.css');
onclick="changeStyle('css/field.css');
```

Here is the JavaScript for the loading bar. Inspiration for this function was taken from w3schools [1].

```
function progress() {  
  var element = document.getElementById("myBar"); //Calling the element myBar by it's ID  
  var width = 1; //Starting width for the progress bar  
  var id = setInterval(bar, 10); //Progress bar intervals are set to 10  
  function bar() {  
    if (width >= 100) { //This if statement is used to check if the progress bar has reached it's limit  
      clearInterval(id); //This will clear the progress bar once it's reached it's limit  
      welcome(); //Calls for the function called welcome  
    }  
    else {  
      width++; //Width of the progress bar increases each time  
      element.style.width = width + '%';  
    }  
  }  
}
```

Three variables are declared at the start of the function which is element, width and id. For the element again it's called by its ID using the 'getElementById' tag. For the width this is the starting value for the loading bar which is set to 1. For the id variable we set it as another function called 'setInterval()' and inside this we call another function called 'bar()' and also set the intervals of the loading bar which is set to 10. For the function 'bar()' an if statement is used. If the width is more than or equal to the max limit of the loading bar which is 100 then two functions will be called. One being 'clearInterval' which will reset the loading bar back to its starting value by calling the variable ID and will also call the 'welcome()' function which will set off the welcome message for the quiz. The if statement does a check and if the statements aren't met then an else statement happens which will increase the loading bar value by using 'width++' which will increment in 10's until the bar reaches 100.

```
function welcome() {  
  alert ("Quiz created by: Scott Mainwaring");  
  window.location.href='question1.html'; //This is a JS version of href  
}
```

Above is an image of the welcome function. This function is set off when the loading bar function conditions have been met. This function creates an alert message telling the user who the quiz was created by. Once the user has clicked 'Okay' on the alert the function will then run the statement 'window.location.href' which is a JavaScript version of the standard href HTML statement.

```
function wrong() {  
  alert ("Wrong Answer!");  
}  
function correct() {  
  alert ("Correct!");  
}
```

The last two JavaScript functions are alerts for correct and incorrect answers. These functions are used using the onclick function when clicking on one of the button options on the website.

References

[1] w3schools, JavaScript, 1998

<https://www.w3schools.com/jsref/default.asp> [Accessed: May, 2018]

Javascript Assignment

GRADEMARK REPORT

FINAL GRADE

50/100

GENERAL COMMENTS

Instructor

WEBSITE

Practical Application and Deployment (70)

Component 1 - Simply changing the stylesheet does not demonstrate very much Javascript skill. You need to show that you can write to ids on the page and communicate via Javascript. You've essentially bypasses this. That's not to say that it's wrong as such, but this module is about demonstrating scripting skills. 8/20

Component 2 - Struggling to see how you've extended this from the w3schools version. You need to extend the functionality. 8/20

Component 3 - Each question is a bit samey - but nevertheless, you have got the answers analysed and moved on to the next page. You could have extended this by having some points, but good overall 13/20

(60 marks – broadly 20 per component)

- Overall integration of website – A bit bare and since there are only 2 sections it's difficult to assess the navigation 5/10 (10 marks)

REPORT

Analysis (15) – Analysis of the technical development of your Javascript component

You've said what you've done, but not really why you took the approach you did. For example, why is setInterval used? (presumably to allow the progress bar to move slowly). Why did you go for the changing of the CSS file rather than individual elements? 7.5/15

Knowledge and Understanding of Subject (15) - Annotated code listing.

Slightly confused at times - for example, the clearInterval line actually removes the timer. The quiz is not fully annotated - you need to show when/why the functions are called. The HTML where this is called is also part of the listing. 8.5/15

OVERALL MARK: 50%

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