Module: COM601 / 66945

Rich Internet Application Development Colin Shewell

Final Year - Assignment 1

BSc (Hons) Interactive Multimedia Design

Date set: 23rd September
Online Submission no later than: 23:59 27th October
(Note: No paper-based materials will be required – all materials and administration will be electronic.)

Contribution towards coursework marks: 35% (and scored out of 35 marks)
Approximate time to be spent: 35 hours (over and above textbook reading time)

Keep a backup copy of all submitted coursework – i.e. your computer files.

Learning Outcomes: To develop expertise in using HTML5, CSS, jQuery and AJAX with JSON formatted data to develop a rich internet application to display information in a web form.

Code files and log showing use and understanding of jQuery and AJAX

This assignment is focused on learning jQuery (but not including plugins or frameworks such as Bootstrap, Foundation or similar) and building components into a rich internet application (i.e. a single web page application) that demonstrates appropriate features of jQuery and how to include AJAX and JSON data.

You are to develop a web page to allow a customer to review their 'saved' quotation for a package holiday. The aim is to demonstrate that you can load the quotation information for the package holiday for the person and display all the appropriate fields with the returned JSON data into the form. You should allow the user to amend the form data and write the code to validate the fields in the client browser. **For this assignment it is not necessary to submit the form back to the server.** You should include a 'Terms & Conditions' cookie to note a new and returning user to their saved quotation.

The key criteria you should address using jQuery / jQuery UI (etc.) components that as clearly, imaginatively and attractively as possible demonstrate the following:

- Use of HTML5 doc type and associated elements and appropriate validation of input
- Use of jQuery selectors to add and remove classes and adding elements directly into the DOM such as
    - Hide/Show/Fade/Toggle capabilities
    - Event Handling, such as form field updates
    - Tooltips, for example, to identify fields with errors.
- An AJAX connection to populate the web form with data via JSON
- Review of optimisation for loading resources.

If all the required code features are clearly present, you will achieve at least a pass mark. However, to achieve a higher mark, you should demonstrate the depth of your understanding by making your web form more professional and distinctive. You are required to make it easy for a user to load their user profile from dynamically read JSON data and present the selected user details in the same web form along with their retrieved quotation for the holiday. Client- side data validation is an important aspect of the web form and the use of HTML5 validation should be included, but is should be assumed the form should include other developer written client-side validation. You should note in a report what features you have attempted and how they perform. (The marker is mainly interested in your jQuery/AJAX/CSS usage.)

Use MS Word or similar to write the report in which you describe the specific features you have added to your RIA, their location in your code (just enough to help the marker navigate your html, js and css files), and explain in general terms how the features work (i.e. explain in English how the jQuery and AJAX works in your application. Your final report should also include screenshots of all your code within the appendix. Before submitting your assignment print your report to PDF with the filename: **technical_log.pdf**. The walkthrough video gives you the opportunity to show the features working dynamically.

Here is some old but very important advice:
Be careful to backup your work frequently on reliable media such as OneDrive or GitLab.

Assessment Criteria

The final page of this document is an annotated version of the feedback will be completed and returned to you via your University email account. The marks will be allocated as shown in the feedback template and comments specific to your work will be added. Please read the text currently under the feedback comments section. It is there to give you further guidance about what is being looked for in this assignment.

Submission Details – note that only electronic documents are involved

By the deadline you must make available on your SCM web site the working site. Failure to have the materials online will treated as a non-submission.

In **access.html** on your SCM site (as you will have developed according to instructions in Practical 2):

(1) The assignment 1 link marked '**Live web site**' should point to a single web page stored as '**public_html/workspace/IA/assignment_1/jquery_form.html**'. You are encouraged to use subfolders within the assignment_1 folder where 'scripts' should hold one or more js files, 'styles' should hold one or more css files and 'images' should hold any jpg, png, etc. files.

(2) The '**technical_log.pdf**' should be uploaded to Blackboard and a copy linked on your access.html page. Your '**technical_log.pdf**' file should be placed in

the folder **assignment_1** – note that no other names or formats will be acceptable.

(3) A short, maximum 2 minute screen cast video uploaded via ShareStream to Blackboard as well as a named '**video.mov**' linked on a button called '**Video Overview**' in the folder **assignment_1** to show dynamically the features you have created as well as a clear readable review of the code that make the features work.

It is your responsibility to test **over the web** (using http://) that your access.html page and the button links specified above lead correctly to the files named (exactly!) **jquery_form.html**, **technical_log.pdf** and **video.mov**.

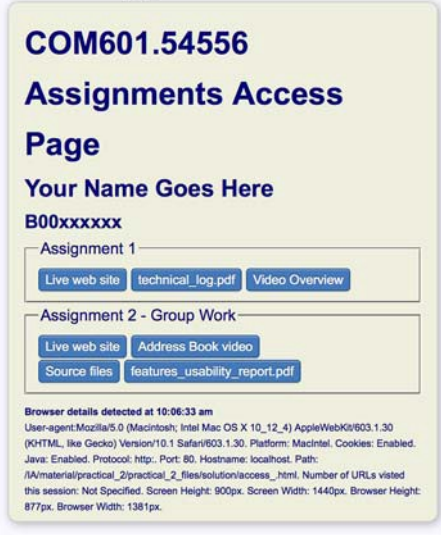

Figure 1: Overview of Assignment 1 Access Page

Each student's public_html/workspace/IA/assignment_1/ folder will be made read-only by the Technical Service Engineers after the deadline and you will not be able to add or change the code from that point, but can still retrieve your files.

Anti-plagiarism Measure

In the interests of avoiding plagiarism, you are strongly advised **not** to make your '**jquery_form.html**', '**technical_log.pdf**' or '**video.mov**' files or related subfolders easily visible on the web - you will be expected to maintain security via the .htaccess file in your workspace.

Before you submit your coursework note the University policy on plagiarism and by uploading the work you will be deemed to be in agreement with the declaration that your coursework is all your own work. Where you have incorporated jQuery or other freely available code libraries, as long as you retain any copyright or other statements concerning authorship contained in them, you will not be open to the charge of plagiarism.

This is the template file that will be used to provide you with feedback.

Student Name: Name

Student ID: B00xxxxxx

Filenames, folders and links all correct for access.html ϒ

Code

Range / use and quality of jQuery High..... Low _____ /15

Range / use and quality of AJAX High ..... Low _____ / 5

Quality/completeness of CSS High ..... Low _____/ 5

technical_log comments and video overview

Clear explanation of key features in written and video forms

High ..... Low _____/ 10

Total Marks:_____out of a possible 35

Feedback comments

(The following are considerations that will be commented on and are set out here as additional guidance on the level of work expected.)

What level of overall effort is evident? How impressive or otherwise is the set of jQuery features (inc. css) included? Was the T&C information presented and controlled by localStorage? Has AJAX been successfully included? Has JSON data been structured and successfully read into the form? Note any omissions from the set of required features and/or features beyond the ones explicitly mentioned in the assignment spec. Is the code well laid out, elegantly structured and with appropriate naming, suitably indented and with helpful comments?

Is the log clearly presented, well written, of suitable length with a good level of detail and showing a good understanding of the code features (and css where relevant)? Does the log show enthusiasm and interest or does it convey limited interest and/or minimal effort? Is the video screencast focused on the key components? Any other relevant comments.

Rich Internet Application			Student (Name/ID):		
Assignment 1	**Poor (0%-39%)**	**Adequate (40%-49%)**	**Satisfactory (50%-69%)**	**Good (70%-9%)**	**Excellent (90%-100%)**
Supporting documentation PDF and Video (10 marks) 1. Justification of selected approach 2. Evidence of a clear design process 3. Demonstration of form working 4. Consideration of performance loading of page and data	Rationale of the technology used is unclear; few techniques from the module are applied; design process is not structured; did not mention timings to load the page and data	Basic rationale of main technology used is well stated; main techniques from the module are appropriately selected and applied to solve problems; design process is structuralised, and need to be improved; did not mention timings to load the page and data	Rationale of most technology used is well stated; most of techniques from the module selected and applied are appropriate; main design process is clear and correct; limited discussions on timings to load the page and data	Rationale of the technology used is well stated; appropriate techniques from the module are selected and applied to solve the problems; some background research is demonstrated; most design process is well defined, correct and documented; good discussion on timings to load the page and data	Rationale of the technology used is stated clearly; appropriate techniques from the module and background research are selected and applied to solve the problems; whole design process is clear and correct; excellent explanation on timings to load the page and data

jQuery features (15 marks) CSS (5 marks) and AJAX (5 marks) covering: 1. Correctness of the solution in terms of its associated specification 2. Use of selectors to add and remove classes and adding elements directly into the DOM 3. Clarity of design and layout 4. Error trapping on finished form 5. Terms and Conditions accounted for via localStorage 6. Ability to read a JSON formatted file from server ($.ajax, $.getJSON and load, etc) 7. Use of Faker data	Most of the specified problems are not solved correctly; selected techniques are not implemented well; web page is not user friendly; difficult to navigate; design process is not defined clearly and code is not structured; content is viewable in web browser with errors; poor presentation of page	Main specified problems are correctly solved; main selected techniques are implemented correctly; user interaction is considered in the design; easy to navigate main functions; main design process is defined; code is structured and readable; main content is viewable in one web browser with errors; plain presentation of page	Most specified problems are correctly solved; most selected techniques are implemented correctly; User interaction is well considered in the design; most design process is defined clearly; code is structured and commented; most content of the web page can run lively under the web browser; straight-forward presentation of page	Specified problems are correctly solved; selected techniques are implemented correctly; user interaction is well considered and implemented correctly in the design, easy to navigate; some background research is demonstrated; design process is defined clearly; code is well structured and commented; all content can run on more than one web browser without errors; good presentation of page	Specified problems are correctly and skilfully solved; selected techniques are implemented correctly; user interaction is very well considered and implemented correctly in the design; web page caters for various user groups; background research is well demonstrated in the design; design process is very well defined; code is well structured, commented and efficient; all content can run without errors through different web browsers; good presentation of page; all aspects are consistent both in the content and design