

The interesting topic

[Science](#), [Computer Science](#)

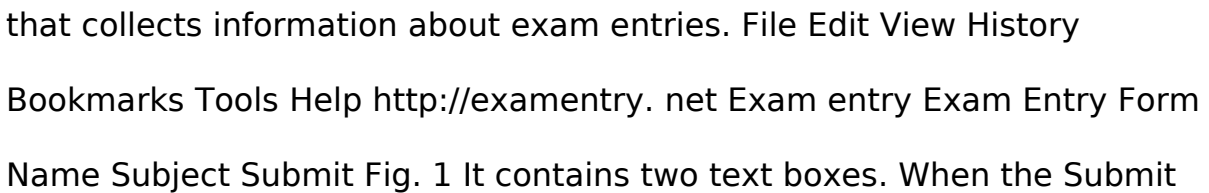


The purpose of this unit is to carry out a practical investigation of a topic chosen from a set of options supplied by OCR. In the course of the investigation, there will be an opportunity to look in depth at an aspect of computing that goes beyond the subject matter outlined in A451. The tasks will require a significant element of practical activity, which must be evidenced in the report and which will form a major element of the assessment. The topics will enable practical investigation and some supplementary research to be carried out in a variety of ways.

These will include, but are not restricted to: practical investigations with hardware or software practical investigations with online resources
Supplementary research may be required and resources may include: web-based enquiry contact with IT professionals research using computer industry publications
OCR 2010 A452 jani3/jun15 3 Candidates should complete all tasks. Validating web forms Many web sites collect information from people using forms. These forms can be put together using HTML form objects. The data entered is normally sent back to the web server where it is processed by database software.

It is always a good idea if the data entered into a computer system is validated in order to reduce the number of errors that occur. A lot of this validation can be carried out at the client end of the process. In other words, processing can be carried out by the browser. There are various ways in which this can be done. A common way is to write scripts that intercept the input data and check it before it is submitted to the server. There are various scripting languages that can be used to write the necessary validation

routines. A popular example is JavaScript. Most browsers are able to interpret JavaScript.

JavaScript, just like other elements of a web page, is best written using a plain text editor such as Notepad. Scripts can be embedded in a web page or saved separately as JavaScript files, using the extension .js. The web page can access these scripts when needed. Here is the starting point for a form that collects information about exam entries.  Fig. 1 It contains two text boxes. When the Submit button is clicked, a script checks that both boxes have been filled in.

Here is the HTML code that lies behind the form and the JavaScript code that does the validation.

```
function validateForm() { var result = true; if (document. ExamEntry. name. value="") { msg+n'ou must enter your name "; document. ExamEntry. name. focus(); document. getElementById('name'). style. color=" red"; result = false; if (document. ExamEntry. subject. value="") { msg+n'ou must enter the subject "; document. ExamEntry. subject. focus(); document. getElementById('subject'). style. color=" red"; result = false; return result; alert(msg) In order to work, the page needs to have access to a second HTML file called uccess. tml. Its purpose is to test the code. It just needs four lines: Success message You entered all the data required Your assignment
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Describe how this HTML code produces the form displayed in the browser (Fig. 1). 2. Describe how the JavaScript function performs the validation check. 3. Describe how the HTML calls the validation routine. 4. Add another

text field to the form to take the user's examination number. Extend the Javascript code to validate this field to make sure that it is not left blank. Extend the Javascript code to make sure that the user's examination number is exactly 4 digits.

Produce evidence to show that you have planned, written and tested your code. 5. Add a set of radio buttons to the form to accept a level of entry such as GCSE, AS or A2. Write a function that displays the level of entry to the user in an alert box so that the level can be confirmed or rejected. Produce evidence to show that you have planned, written and tested your code. 6. Produce an evaluation of your solutions. 7. Write a conclusion about the effectiveness of JavaScript validation routines to reduce the number of errors that are made in data input. BLANK PAGE Copyright Information OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials.