

JavaScript and AJAX Lesson 7 Exercise 1:

Working with functions

- Open the web page <http://learn.cf.ac.uk/staff/semahd/function-exercise.html>
- Copy the page's source code into an HTML5 page
- In the **script** tag (as indicated in the code), create two functions
 - `sumThem()` - a function to add the three numbers passed into it
 - `showIt()` - a function to display the result calculated by `sumThem()` in the `#owt readonly` text box

You can use plain JavaScript, JQuery or any other JavaScript framework that you like. You should make sure that users only enter numbers into the text inputs. If the user enters something that cannot be interpreted as a number, you should output a warning and stop execution.

Lesson 7 Exercise 2: Working with objects Create a `SimpleDate` object to use instead of the built-in JavaScript `Date` object. It should store only date information (i.e. not time information) – the day of the month, the month number and the year. The object constructor should take zero, one, two or three integer parameters:

- If no parameters are passed in a `SimpleDate` object for the current date should be constructed. You can use the real **JavaScript** `Date` object for this.
- If one parameter is passed in, it should be taken to be the day of the month. The month should be assumed to be January, and the year should be assumed to be the current year. You can use the real **JavaScript** object to get the current year.

- If two parameters are passed in, these should be taken to be the day and the month (in that order). The year should be taken to be the current year and you can use the real **JavaScript** Date object to get this.
- If all three parameters are passed in, they should be taken to be the day, month and year in that order.

Your **JavaScript** should check that the parameters can be used to create a valid SimpleDate object. So the day of the month should be valid for the month specified.

For a real challenge, try to get the right maximum number of days for February depending on whether or not the year is a leap year. You might want to revise what years are leap years. It may not be as straightforward as you think.

When you have coded up your object, create a web page that asks the user to input a day, a month and a year from which you will create a SimpleDate object.

Users may enter a day only, a day and a month or a day, month and year. Entering just, for example, a month and year or a day and year is not permitted. Your code should check that the user input conforms to these rules.

If the user input is invalid, either because the user has entered data in the wrong inputs or because any date constructed from the input would be invalid, you should display an explanatory error message and erase the input from the input boxes ready for another try.

If the user input is valid, you should construct a SimpleDate object and display it on the page in the format dd MMM, yyyy (e.g. 01 Jan, 2010 or 23 MAR, 1948).

