

Concordia University
SOEN 287: Web Programming 1 – Winter 2016
Assignment 3

Due Date:	By 11:55pm Wednesday March 16, 2016
Evaluation:	6% of final mark
Late Submission:	none accepted
Type:	Individual Assignment
Purpose:	The purpose of this assignment is to have you practice JavaScript and use JavaScript to operate on DOM model
CEAB Attributes:	This assignments is primarily evaluating your use of JavaScript and DOM models hence <i>use of engineering tools</i> as well as <i>design</i> .

Exercise 1: Code JavaScript (6 pts)

All your JavaScript functions must be declared in the document head section and each functions name must be as specified below. To demonstrate the functionality of each method, you must make function calls in the document body. Include a heading (h1... h6) that indicates which function is being tested before each function demonstration. The use of Global Variables is forbidden!

- A. **Function:** addNumbers
Parameter(s): Array of numbers
Each element in the array must be added and the summation (answer) must be returned.
- B. **Function:** getCurrentDate
Parameter(s): None
Retrieve the current date in the format similar to: *Monday, May 10, 2010* and return it.
- C. **Function:** arrayToString
Parameter(s): Array of words
All the elements of the array must be concatenated into a single string and returned.
- D. **Function:** findMaxNumber
Parameter(s): None (Hint: Make use of the arguments array – page 167 in course book)
From the arguments array, find the number element that is the largest and return it.
- E. **Function:** getDigits
Parameter(s): A String
Scan the string and find all the digits (0-9), concatenate them into a string in the order that they are found and return the string of numbers.
- F. **Function:** reverseString

Parameter(s): A String

Reverse the entire string (character by character) and return the resulting string.

Exercise 2: Calculate your order

Please reference to the demo implementation below. First, design an online order page, with several items and their prices (you can give any items and prices). Allow the visitor to enter the quantity of each item. After the visitor presses “Place order” button, the total cost is displayed on the same page beneath the form.

All JavaScript code must be external. If any fields are left blank or do not contain an integer (must be an integer), an alert box should display an appropriate error message upon form submission. Hint: use pattern matching.

Order Books Online		
Book	Quantity	Price
Basic XHTML	<input type="text" value="2"/>	\$19.99
Intro to PHP	<input type="text" value="5"/>	\$86.00
Advanced JQuery	<input type="text" value="4"/>	\$55.00
<input type="button" value="Place Order"/>		

Before the “Place Order” button is pressed

Order Books Online		
Book	Quantity	Price
Basic XHTML	<input type="text" value="2"/>	\$19.99
Intro to PHP	<input type="text" value="5"/>	\$86.00
Advanced JQuery	<input type="text" value="4"/>	\$55.00
<input type="button" value="Place Order"/>		
Basic XHTML (Quantity = 2): \$39.98		
Intro to PHP (Quantity = 5): \$430		
Advanced JQuery (Quantity = 4): \$220		
Final Total: \$689.98		

After the “Place Order” button is pressed

Exercise 3

Given the following XHTML page:

```
<html>
  <head>
    <title>Exercise 3</title>
  </head>
  <body>
    <p><strong>User Information:</strong></p>
    <div id="content"></div>
```

```
</body>
</html>
```

Create an embedded JavaScript function named ***getUserInfo*** that prompts the user with the following two questions after the XHTML page has loaded:

- What is your full name?
- How old are you?

The function should then build a string in the form of:

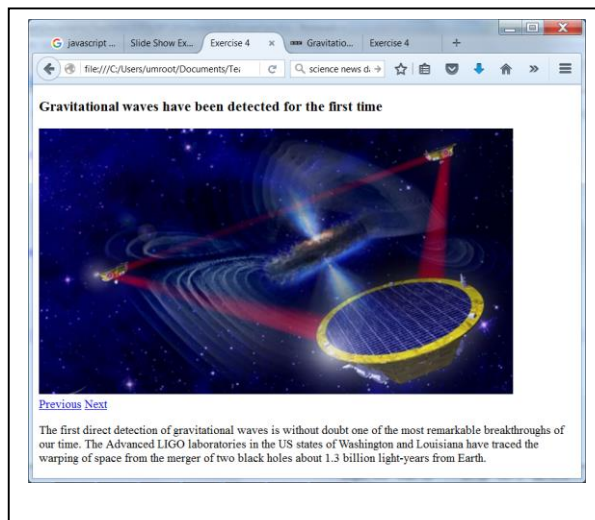
Hi, my name is *FULL-NAME* and I'm *XX* years old.

The string must then be inserted into the container div with id: *content*.

```
<div id="first">
    <span class="red">This is a DIV Container</span>
</div>
<div id="second">
    DIVs are a powerful way to modularize presentation
</div>
```

Exercise 4: A simple slide show

Slide show is normally implemented by JavaScript. Here is a simple one. This page shows a news about gravitational wave discovery. Under the image, there are two links. When you click the link, the image changes to the next image. Please implement this slide show.



The text and the images used for this exercise are from a BBC news report on Feb 11, 2016. The link <http://www.bbc.com/news/science-environment-35523676>. Just for classroom use.

Exercise 5: Step 2 of the Running Project - Adopt a Dog/Cat

Following are the additions for the Pet Adoption Website started in assignment 2

1) ***Date and Time:***

In the header area of your website, use JavaScript to display the current date and time. The Time should automatically refresh every second.

2) ***Browse Available Pets*** page:

Create a ***Browse Available Pets*** page linked from the side menu. Inside the content area of this page, create a list of a couple of fictitious pets available for adoption: `pets.html`. Include an image, along with the information found in the ***Have a pet to give away*** page. Make sure the format of the page is easy to read and that the look is consistent with the rest of your site.

Next to each pet, add a button labeled "*Interested*". In this iteration of the project, clicking on the button need not do anything.

3) ***Find a dog/cat*** page:

The form was created in the previous assignment. In this assignment you are to use Javascript to do client-side validation. When the forms submit button is pressed you should check that no fields is left blank.

4) ***Have a pet to give away*** page:

The form was created in the previous assignment. In this assignment you are to use Javascript to do client-side validation. When the forms submit button is pressed you should check that no fields is left blank and that the email provided is in valid format.

Hint: Regular Expressions are your friend, but you should look up what a valid format for an email is.

Submitting Assignment 3

- Please give meaningful names to each html and js file to make the feedback process easier.
- Naming convention for zip file: Create one zip file, containing all folders/files for your assignment.
- The zip file should be called *a#_studentID*, where # is the number of the assignment and *studentID* is your student ID number.
For example, for this third assignment, student 123456 would submit a zip file named *a3_123456.zip*

Evaluation Criteria for Assignment 3 (20 points)

Question 1 - 6 pts.	
a) addNumbers()	1 pt
b) getCurrentDate ()	1 pt
c) arrayToString ()	1 pt
d) findMaxNumber()	1 pt
e) getDigits()	1 pt
f) reverseString()	1 pt
Question 2 - 4 pts.	
a) Online order form	1 pt
b) Make sure all fields have an integer	1 pt
c) Calculate & display total as well as summary of order	2 pts
Question 3 - 2 pts	
<ul style="list-style-type: none"> Prompt user and imbed string 	2 pts
Question 4 - 2 pts	
<ul style="list-style-type: none"> Implement simple slide show 	2 pts
Question 5 - 6 pts.	
a) Date and time in header	1 pt
b) Browse available pets	1 pt
c) Validate input for Find a dog/cat page	2 pts
d) Validate input for Have a pet to give away page	2 pts
TOTAL	20 pts