SCHOOL OF COMPUTER SCIENCE
COURSEWORK ASSESSMENT PROFORMA

MODULE & LECTURERS: Dr Natasha Edwards and Dr Martin Caminada

DATE SET: Monday, 19th February 2018

SUBMISSION DATE: 9:30 am, Friday 9th March 2018

You will need to both submit you work by the above deadline, as well as demonstrate it to a lab tutor **during your normal lab slots in Week 7**

IMPORTANT: See the main document for further details!

SUBMISSION ARRANGEMENTS:

1. Electronically via Learning Central **and** the submission server
2. Demonstration in the lab.

See the main document for further details.

TITLE:

Payment form validation using JavaScript

This coursework is worth **5%** of the total marks available for this module. The penalty for late or non-submission is an award of zero marks. You are reminded of the need to comply with Cardiff University's Student Guide to Academic Integrity. Your work should be submitted using the official Coursework Submission Cover sheet.

INSTRUCTIONS

See the main document

SUBMISSION INSTRUCTIONS

See the main document

CRITERIA FOR ASSESSMENT

See the main document

FURTHER DETAILS

See the main document

Dr Natasha Edwards
Dr Martin Caminada

Cardiff University
School of Computer Science & Informatics

CM1102 Web Applications

ASSESSED EXERCISE - SPRING ONE

Payment form validation using JavaScript

Date set	Week 4, Monday, 19th February 2018
Submission date	Week 6, 9:30 am, Friday 9th March 2018
Demo date	Week 7 in **YOUR** lab slot

This exercise is worth **5%** of the total marks available for this module.

Submission Arrangements

Submission:

- Via Learning Central, submit by Week 6, 9:30 am, Friday 9th March 2018:
  - A single `.zip` archive that includes the *complete source code* of your website, with the same structure as needed for deployment on the project server, including all required assets such as images.
  - A plain text file named `readme.txt` that includes: your name, student number, e-mail address, and the URL of the website on the project server. (If your website requires authentication, make sure you also provide the relevant credentials.)
  - The standard COMSC coursework submission coversheet.

- Upload your website to the submission server by the same deadline (Week 6, 9:30 am, Friday 9th March 2018). No changes are allowed after this deadline. Do not upload the `.zip` archive to the submission server — deploy your website ready for use!

  Important: It is essential that you place your entire website in a folder named `CM1102/javascript-cw`, which has been created for you. You should be accessing the submission server the same way as you normally do: using SFTP protocol at `websites.cs.cf.ac.uk`. The websites uploaded into the `CM1102` folder will be accessible via `http://submission.cs.cf.ac.uk/<yourmailname>`.

Demonstration: During your **normal** lab slots in Week 7, you will need to *demonstrate* your website to a lab tutor. Demonstrations after the above deadline **will not be accepted**. Demonstrations in the lab other than you have been allocated to **will not be accepted**. The tutors will mark your website works according to the criteria shown at the end of this document, and will provide instant feedback. If you have any questions regarding your mark, or if you need additional feedback, please do not hesitate to discuss this with the examiner ***while in the lab***.

The penalty for late or non-submission is an award of *zero marks*. You are reminded of the need to comply with Cardiff University's Student Guide to Academic Integrity. See also the electronic coursework submission policy, available on Learning Central.

Instructions

The aim of this assignment is to construct a web page that displays, in a nicely formatted way, a credit card payment form such as may be used in an online shop. The form should include the following fields:

- Card number
- Cardholder's name
- Expiration date
- Security code (CVV2)

There should also be a button to submit the form.

An example layout is shown in Fig. 1. You do not have to adhere to this specific layout as long as your form prompts for all the necessary information and is æsthetically pleasing. You do not have to write any server-side scripts to process this form.

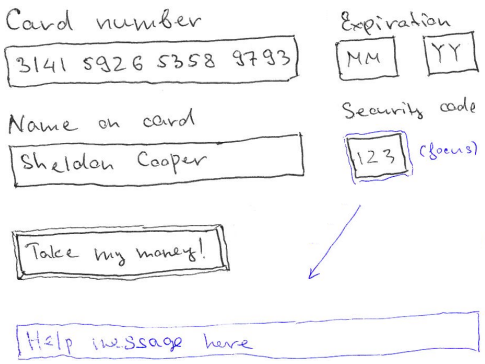

Figure 1: Example layout for the payment form.

Prior to submission of the form (*i.e.* when the user clicks the "Submit" button, but prior to being sent to the server), the values entered by the user should be validated for basic errors on the client's side, with an appropriate JavaScript `onSubmit` event handler. The following criteria need to be checked:

- The card number is a string consisting of 16 digits[1].
- The cardholder's name is not empty.
- The expiration date is not empty.
- The month is an integer number between 1 and 12.
- The year is an integer number ≥ 2017.
- The security code is a three-digit integer number.

If any of these criteria are not satisfied, a helpful error message should be shown to the user, *e.g.* *"Please enter the expiration date"*. Further, when any of the form fields receives focus (`onFocus` event), a help message should appear below the form explaining to the user what information needs to be entered into this field. All of the above needs to be implemented entirely in pure JavaScript. **You must NOT use any HTML5 validation features!**

The website should be written entirely by hand using only HTML, CSS, and JavaScript. The form should be æsthetically styled using CSS from a style sheet located on the server. **You must NOT use any form of HTML/CSS code generator apart from your own JavaScript code.**

[1]For this exercise, you do *not* need to make any further checks for correctness of the card number. If you are curious, however, see `http://en.wikipedia.org/wiki/Luhn_algorithm`

Criteria for Assessment

Credit will be awarded against the criteria shown in the marking form on the next page. The examiners will have the discretion to award partial marks when a component is only partially implemented or is not fully working.

Feedback

Feedback on your performance will address the assessment criteria and will be instantly given by the examiner immediately after the demonstration. If you have any questions regarding your mark, or if you need additional feedback, please do not hesitate to discuss this with the examiner ***while in the lab***.

Good luck!

ASSESSED EXERCISE - SPRING ONE

First name:

Last name:

Student number: (without the initial letter)

Examiner: (initials)

Time: :

Criteria	**Marks** 0 1 2
An HTML form is created with appropriate fields	
The `onFocus` event is handled in all fields and a help message is shown for each field upon receiving focus	
The following criteria are checked at submission of the form and an error message is displayed if they are not satisfied:	
✓the card number is a string consisting of 16 digits,	
✓the cardholder's name and expiration date are not empty,	
✓the month is an integer number between 1 and 12,	
✓the year is an integer number ≥ 2017,	
✓the security code is an integer three-digit number.	
The website is styled with an external CSS.	
TOTAL	/10

To streamline the demo: Please fill in your details at the top of the marking form prior to the demonstration. The markers will fill in the marks in this form and, after giving feedback, will collect it from you. Please also be prepared to show the source code of your JavaScript programs.