CSCI 2720 – Building Web Applications
Assignment One: Bootstrap Web Page with a Web Form

Released: 27th September 2023

Due: 23:59, 18th October 2023

Synopsis:

You are going to build a web page to introduce a celebrity. This page should be well-decorated and responsive. There are specific features that need to be included, as outlined in the following problems. Please note that factual accuracy is not necessary for the content.

Problem 1: Basic contents (10%)

These HTML elements must be included in your HTML5 file:

- Heading
- List
- Table
- Hyperlink
- Image / Picture

These HTML5 semantic elements must be used appropriately:

- `<header>`
- `<main>`
- `<nav>`
- `<section>`
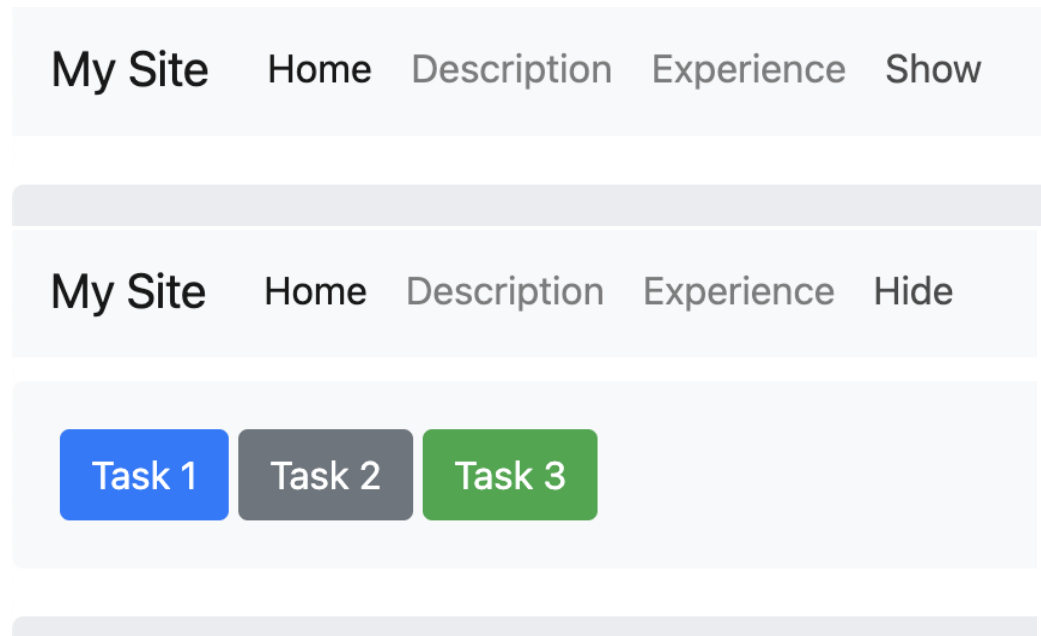- `<aside>`

Problem 2: Styling (15%)

Using Bootstrap and/or CSS, apply the following to your page:

1. At least one column implemented using bootstrap class
2. Header background image
3. Section with background color
4. Horizonal link items in navbar
5. Customized font and icons (can be in paragraph or in section header)

Problem 3: Dynamic contents (35%)

Task 0: Hide/show button

Include a button to hide or show an extra bar of buttons for the following task with their features described below. When the bar is hidden, the button should read "show" and "hide" while bar is shown. Here is an example.

Task 1: Align
This is the first button in the hidden bar. It should has the text "Task 1: Align" and change align mode of text in columns once the button is clicked. The align mode should change in the sequence:

Left >> Center >> Right >> Left …

Note: the classes in Bootstrap is .text-start, .text-center, and .text-end

Task 2: Spotlight

When this button is clicked, a dialog box (*using prompt()*) asks the user to enter a spotlight of the celebrity. If the user entered something, a new item should be added to the group of "spotlight" in your page. If nothing is entered, no new item should be created.

Task 3: Scroll

When this button is clicked, a Bootstrap progress bar (https://getbootstrap.com/docs/5.2/components/progress) is shown or hidden below the button bar. If it is shown, when the user scrolls the page, the progress bar adjusts according to the scroll position, i.e., 0% at the top and 100% at the bottom. The progress bar should be applied a **.sticky-top** class, so that it remains visible on the screen when the page is scrolled. You may find these helpful: **window.scrollY, document.body.clientHeight, window.innerHeight**

You may choose to use Bootstrap classes or CSS styles for all styling tasks in this problem.

Problem 4: Submit comments (15%)

Add the web form into your web page to collect the following information from user:

- Email address
- Color: *Red/Green/Yellow/Blue*
- Comment

You are recommended to use `input` boxes for the shorter text for email address, a `textarea` for the comment paragraph, and a group of `radio` buttons for the color. You may also decide your own implementation achieving similar user experience.

There should be an **Add comment** button which adds the comment to the bottom of all comments. After the new comment appears, the form should become blank again.

It is okay for your page to come with default comments included, and a comment data file.

Problem 5: Form validation (10%)

When the user choose **Add comment**, there could be issues, in particular:

- Incorrect email format (not *x@y*)
- Empty comment/ email

Both situations above should avoid the form submission. Implementation is flexible.

For example, at the beginning when *processing the form*, you may check the `validity` property of `#new-email` and `#new-comment`. If it is not valid, apply `.classList.add("is-invalid")` to the box and `return` (end the function prematurely). Otherwise, use `.classList.remove("is-invalid")` to clear the error highlight.
See more at: https://www.w3schools.com/js/js_validation_api.asp

Problem 6: Loading and saving comments (15%)

You are required to implement the following feature:

- Save new comments whenever a new comment is added
- Load new comments from saved file when the page loads

The feature can be done using JS Fetch, with *Simple Web Server*. Your comment file can be in text or json. *Simple Web Server:* https://simplewebserver.org

Submission:

We will only visit your web page submission using *Google Chrome* (almost-latest versions) with *Simple Web Server*. We will consider all your files in the same local server directory (i.e., everything is in the same folder). Please utilize the *Developer Tools* for debugging.

Plagiarism is heavily penalized. Never share your code. Please read this article carefully: https://www.cuhk.edu.hk/policy/academichonesty/

Include your full name and student ID *on top of all code files using comments*. You should also include the required *code header for honesty declaration*. Check that the file names and formats are correct. Zip all your files and submit it on the course site on BlackBoard. You can have unlimited submission. We will only grade you latest zip file. Name your zip file as:

```
(SID)_asg1.zip
```

You zip file should only include:

1. One `.html` file
2. One `.js` file
3. Optional `.css` file
4. Image files or comment data files

If you need help, please feel free to contact the main TA for Assignment One:

Mr. Liang Hong (liang.hong@link.cuhk.edu.hk), SHB116, Monday 16:30-17:30.

Or the course instructor:

Dr Colin Tsang (colintsang@cuhk.edu.hk), SHB130, by appointment.

Remark: We welcome any questions, but we will not do debugging for you.

Late submission: A 30%-mark deduction will be applied for late submissions within three days. Late submissions more than three days will not be graded.

Code header for honesty declaration:

```
<!-- I declare that the lab work here submitted is original
except for source material explicitly acknowledged,
and that the same or closely related material has not been
previously submitted for another course.
I also acknowledge that I am aware of University policy and
regulations on honesty in academic work, and of the disciplinary
guidelines and procedures applicable to breaches of such
policy and regulations, as contained in the website.

University Guideline on Academic Honesty:
https://www.cuhk.edu.hk/policy/academichonesty/

Student Name : <your name>
Student ID : <your student ID>
Class/Section : <your class/section>
Date : <date> -->
```