

Concordia University
Department of Computer Science and Software Engineering
SOEN 287: Web Programming – Winter 2019
Assignment 4

Due Date: By 11:55pm, Sunday, April 14, 2019
Type: Individual Assignment
Purpose: The purpose of this assignment is to have you to practice HTML, CSS, JS, PHP and create a website
CEAB Attributes: This assignment is primarily evaluating your use of Web programming Skills (Knowledge base & design)

Exercise 1

The following set of short questions will focus on getting you familiar with how to write PHP functions as well as how to make use of the pre-existing PHP functions. All your PHP functions must be declared in the document body 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 the function is being tested before the function demonstration. The use of Global Variables is forbidden!



A. Function: findSummation

Parameter(s): A positive integer number (default value is =1)

Given the input positive number (N), find the summation of all positive integer numbers from 1 to N ($1+2+3+\dots+N$) and return this summation. If the input parameter is not a number, or if it is not a positive number return false.

B. Function: uppercaseFirstandLastSorted

Parameter(s): String

For each word in the input string, capitalize (uppercase) both the first letter and the last letter, then sort the words alphabetically (assume all the words contains just letters) and return the modified string.

C. Function: findAverage_and_Median

Parameter: An array of numbers.

Calculate the average and median of the numbers and return both values.

D. Function: find4Digits

Parameter: A string of numbers separated by spaces.

Return the first four-digit number in the string; false if none.

Exercise 2

Create a php page (name it numOfVisits.php) that uses cookies to record and track the number of times a webpage has been visited. If the visitor is looking at the webpage for the first time, it should display the following message: *Welcome to my webpage! It is your first time that you are here.* If the page has been visited more than once, display: *Hello, this is the ## time that you are visiting my webpage* (where ## shows the number of visits). In this case you should also display a message that shows the day of the week, date, time and the time zone on your server that the page was visited last time in the following format (as an example):

Last time you visited my webpage on: Sat November 10 17:16:18 EST 2018

(EST= Eastern Standard Time Zone)

Exercise 3

Write an HTML document to provide a form that collects family names and telephone numbers. The family name should start with capital letters, not include any space or non-letter characters, and the length should not be more than 30 characters. The phone numbers must be in the format (ddd)-ddd-dddd. Write a PHP script that checks the submitted last name and the telephone number to be sure that they conform to the required format and then returns a response indicating whether the format was correct.



Exercise 4: Project

In this exercise we continue the Hotel Room Reservation Problem (from assignment 3) and will have the goal of building a website. (Note: since this assignment introduces PHP into the project, it is likely that some of your web pages will have to have their extensions changed from .html to .php).

Hotel Room Search Website

Running Problem – Version 3

This version requires HTML, CSS, JS and PHP.



- 1) Create a template for your entire site such that you define the header and footer once and include them in each page of the site. This should be done using PHP.
The following is just as a reminder of what the header and footer should contain.

2)

- **Header:** It should include the name of your service and a logo/picture. Clicking on the logo/picture should take you back to the home page. It should also display the current date and time. The Time should automatically refresh every second.
- **Footer:** This should appear at the bottom of all your pages. Give it a distinct background color and include links to a **Privacy/Disclaimer Statement** which can either appear in the content area of the site or in an alert or confirm box. It should display a message promising users that their information will not be sold or misused, and protects the website builder from any incorrect information.

3) You will manage 2 text files which will reside on the server.

- A *login file* which will contain username and passwords. This file will be consulted when a user is logging in. Each field should be separated by colon (:) and each user info is in one line.

For example if I have a file with 3 accounts, the file will look like so:

```
user1:pass1
user2:pass2
user3:pass3
```

- An *available Hotel Rooms information file* that will store the information about location, address, number of available rooms, special facilities and price per night. Design your own format and field name for search. For simplicity assume that you do not need to verify the check-out and check-in dates and all the hotels listed in your file are available for any time interval that the user enters.

4) Functionality of your site: Add the following functions to your site:

- **Search:** enter some search criteria and submit the query to a server site PHP program. This PHP program can search in the available Hotel Room information file and find the matching hotel. Please notice that you can have none or multiple matchings.
- **Login/Create New Account:**
 - Add a login button at the top-right corner of the search page.
 - When a user clicks on this button, a login page loads into the content area with text fields for a username and one for a password as well as a login button. Below the login button, you can show a description of the allowed formats for usernames and passwords. A username can contain letters (both upper and lower case) and digits only. A password

must be at least 6 characters long (characters are to be letters and digits only), have at least one letter and at least one digit. Before sending this information to the server make sure that the entered username and password satisfy the format criteria just listed.

- A user can input a username and a password on the login page. If the username and the password is a match verified by a PHP program against the log in file, redirect the user to the search page with “welcome, username” at the top-right corner (besides the login button). If the username exists and the password is not a match verified by a PHP program against the log in file, stay on the login page and show “invalid login” before the login button and allow the user to re-enter inputs. If the username does not exist, write this new pair to the login file following the format specified in bullet 3 and return a new page to confirm that the account was successfully created and display a button to redirect the user to the search page.
- **Connect the search page and the account login:** if the user has logged in, show the full search results – Hotel name, area, street address and price per night. If the user does not login, the search results include only the area information without the name and street address, and there should be a button “login to show the address” besides each result item. User can click the button to login. You do not need to cache the search results. After the login, the search starts again.

Note:

- 1) Although it is not a functional requirement, your site should always be well organized with properly named files and well defined directories.
- 2) Any pictures, graphics, text, code, you “borrow” from other sites, be sure to give credit to. Be aware of plagiarism.

Submitting Assignment 4

- Please give meaningful names to each html, js and php file to make the feedback process easier.
- Naming convention for zip file: Refer to assignment 3 handout.
- For submission instructions please refer to the course web page.
- Assignments not submitted to the correct location or not in the requested format will not be graded.

Evaluation Criteria for Assignment 4 (20 points)

Exercise 1 – 4 pts.	
a) findSummation()	1 pt
b) uppercaseFirstandLastSorted	1 pt
c) findAverage_and_Median	1 pt
d) find4Digits	1 pt
Exercise 2 - 4 pts.	
a) Creating cookie	1 pts
b) Storing the visits count using cookies	2 pts
c) Showing the visits count and date & time	1 pts
Exercise 3 - 2 pts	
a) Creating a form	1 pt
b) Data validation on the form	2 pt
Exercise 4 - 10 pts.	
a) Header and footer	3 pts
b) Search php	3 pts
c) Login php	3 pts
TOTAL	20 pts