Computer Science 215
Assignment 03

Learning objectives:

- Practice JavaScript control structure: decision making
- Practice JavaScript loop
- Practice JavaScript nested loop

Instructions:

Complete the following **5** problems. You need to:

1. Create separate .html files for each of the following JavaScript programming problems. You can put your JavaScript code in .js file and include it in your .html file or write JavaScript code segment in .html directly using <script></script> tag.
2. Create an index.html that includes the links for all programming problems.
3. Create the style sheet for your webpages to make it look good.
4. Follow CSCI215AssignmentsPolicy.pdf to put document in your program and make sure to include meaningful comments and output messages to receive full credit.
5. For those input boxes, please use the testing cases as default values.

Note: 2, 3, 4 & 5 count **10%** of the grade.

Activities:

1. classRank.html (10pts)

Your class rank is determined by the number of credits you have earned:

Freshmen	0 – 29
Sophomore	30 – 59
Junior	60 – 89
Senior	90+

Ask a student for his/her number of credits using prompt or input box, then display his/her class rank.

2. FizzBuzz.html (20pts)

Write a program that receive a number *n* in range of 20 to 50 from user (you need do input validation), then prints the numbers from 1 to *n*. But for multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".

3. BMI.html (20pts)

Create a webpage that display a user's Body Mass Index (BMI) and roughly estimate the life expectancy based on gender and calculated BMI.

You can use three input boxes to receive user's gender, weight (in kg) and height (in cm). BMI is calculated using the following formula.

$$Body\ Mass\ Index = 10000\frac{Weight}{Height^2}$$

A high BMI can indicate high body fatness. For an adult, if BMI is larger than 25, it falls within the overweight range.

The program should display the estimated life expectancy based on the following condition:

a. 79.4 years for a not overweight male
b. 83.5 years for a not overweight female
c. 77.3 years for an overweight male
d. 81.4 years for an overweight female

Display BMI and the life expectancy in 2 decimal precision. For example: for a female with 162cm height and 60kg weight, the BMI is 22.86, the estimated life expectancy is 83.5years.

4. login.html (20pts)

Write a program that validate user's credential. Please use prompts to get user's login name and password. Your program should keep asking users until they enter correct credential or no more than 3 times, use alert box to show how many trials left.

Note: you can validate the username and password separately or simultaneously given the username is `csci215` and password is `grace2024`.

5. trangle.html(20pts)

Create a webpage with buttons to draw different shape of triangles using nested loop. An example triangle is shown as follows:

```
          *
        * *
      * * *
    * * * *
  * * * * *
* * * * * *
  * * * * *
    * * * *
      * * *
        * *
          *
```

Hint: If you're having trouble, try drawing a solid square first. I like to start by writing a loop that displays a single row of the square, and then "wrapping" that loop in an outer loop that makes the row appear to repeat multiple times, thus creating the square.