BCVD1006 – Full Stack Development – Lab 10

● JavaScript Function Expressions and JS Math

Developer Note:

- Please create a separate JavaScript file for each exercise
- You may use the HTML page to trigger your scripts or you may use the JS Playground Editors (REPL) to program and just submit the JS file.
  - https://repl.it/languages/javascript
  - https://jsfiddle.net/

Resources

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Number/toFixed

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Number/parseFloat

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/PI

Exercise 1:

Write a script that determines if the **given number is less than or equal to zero**.

- Create a **function expression** that takes a number as its only argument and **returns true** if it's less than or equal to zero, otherwise **return false**.
- Invoke the function and call it to return a result
- Hint: you may need to use conditional statements

Expected output is as follows:

```
lessThanOrEqualToZero(5);  // => false
lessThanOrEqualToZero(0);  // => true
lessThanOrEqualToZero(-2); // => true
```

Exercise 2:

Write a script that determines the Football Points of a given team record.

- Create a **function expression** that takes **3 parameters**, the number of wins, draws and losses and calculates the number of points a football team has obtained so far.
  - **wins** get 3 points
  - **draws** get 1 point
  - **losses** get 0 points
- Invoke the function and call it to return a result

Expected output is as follows:

```
calculatePoints(3, 4, 2); // => 13
calculatePoints(5, 0, 2); // => 15
calculatePoints(0, 0, 1); // => 0
```

Exercise 3:

Write a script that determines the <u>Theatre Admittance</u> of a given guest..

- Write a **function expression** that checks whether a guest can watch an MA15+ rated movie. One of the following **two conditions** is required for admittance:
  - The guest is at least 15 years old.
  - They have parental supervision.

The **function accepts two parameters**, age and isSupervised. **Return a boolean**.

```
allowedIntoMovie(14, true) //  => true
allowedIntoMovie(14, false) // => false
allowedIntoMovie(16, false) // => true
```

Exercise 4:

Write a function expression that does the following

- Given a number n, write a function that returns PI to n decimal places.

```
fixedPi(5) // =>  3.14159
fixedPi(4) // => 3.1416
fixedPi(15) // => 3.141592653589793
```

Exercise 5:

Create a **function** that takes two numbers and a mathematical operator + - / * and will perform a calculation with the given numbers.

```
calculator(2, "+", 2); //=> 4
calculator(2, "*", 2); // => 4
calculator(4, "/", 2); // => 2
calculator(4, "/", 0); // => 'Can't divide by 0!""
calculator(10, "-", 5); // => 5
calculator(true, "+", 5); // => "Enter numbers only!"
calculator(10, "+", "asdf"); // => "Enter numbers only!"
```