# **FUNCTIONS**

Assignment # 35-38

JAVASCRIPT

MODULE A - Mobile & Cloud Computing

# | FUNCTIONS |

- 1. Create a block of code that you can use several times.
- 2. Write a function that displays current date & time in your browser.
- 3. Write a function that takes first & last name and then it greets the user using his full name.
- 4. Write a function that adds two numbers (input by user) and returns the sum of two numbers.

# 5. Calculator:

Write a function that takes three arguments num1, num2 & operator & compute the desired operation. Return and show the desired result in your browser.

- 6. Write a function that squares its argument.
- 7. Write a function that computes factorial of a number.

- 8. Write a function that take start and end number as inputs & display counting in your browser.
- 9. Write a nested function that computes hypotenuse of a right angle triangle.

 $Hypotenuse^2 = Base^2 + Perpendicular^2$ 

Take base and perpendicular as inputs.

Outer function: calculateHypotenuse()

Inner function: calculateSquare()

- 10. Write a function that writes variable length arguments list in your browser.
- 11. Write a function that accepts any number of arguments & find largest of the number.
- 12. Write a function that calculates the area of a rectangle.

A = width \* height

Pass width and height in following manner:

- a. Arguments as values
- b. Arguments as variables
- 13. Write a function that receives an array & returns the sorted array.

- 14. Write a function that takes numbers array, sums its elements & returns the sum.
- 15. Execute & monitor the output of following JS program:
   var param = function inner() {
   return typeof inner;
   }
   alert(param());
- 16. Write a function that computes power of a number. E.g.  $2^3$  is 8.
- 17. Write a function that simulates a dice & returns a random dice value.
- 18. Write a JavaScript function that reverse a number. Example x = 32243; EXPECTED OUTPUT: 34223
- 19. Write a JavaScript function that checks whether a passed string is palindrome or not?

  A palindrome is word, phrase, or sequence that reads the same backward as forward, e.g., madam.
- 20. Write a JavaScript function that accepts a string as a parameter and converts the first letter of each word of the

string in upper case.

EXAMPLE STRING: 'the quick brown fox' EXPECTED OUTPUT: 'The Quick Brown Fox'

- 21. Write a JavaScript function that accepts a string as a parameter and find the longest word within the string. EXAMPLE STRING: 'Web Development Tutorial' EXPECTED OUTPUT: 'Development'
- 22. Write a JavaScript function that accepts a string as a parameter and counts the number of vowels within the string.

EXAMPLE STRING : 'The quick brown fox' EXPECTED OUTPUT : 5

23. Write a JavaScript function which accepts an argument and returns the type.

Note: There are six possible values that typeof returns: object, boolean, function, number, string, and undefined.

24. Write a JavaScript function to extract unique characters from a string.

**EXAMPLE STRING:** 

"thequickbrownfoxjumpsoverthelazydog" EXPECTED OUTPUT : "thequickbrownfxjmpsvlazydg"

25. Write a JavaScript function that accepts two arguments, a string and a letter and the function will count the number of occurrences of the specified letter within the string. *Sample arguments*: 'JSResourceS.com', 'o'

#### **EXPECTED OUTPUT: 2**

### 26. The Age Calculator

Forgot how old you are? Calculate it!

- Write a function named calculateAge that:
  - o takes 2 arguments: birth year, current year.
  - o calculates the 2 possible ages based on those years.
  - outputs the result to the screen like so: "You are either NN or NN"
- Call the function three times with different sets of values.
- Bonus: Figure out how to get the current year in JavaScript instead of passing it in.

#### The Age Calculator

Current Year : 2015 Birth Year : 1994

They are either 21 or 22 years old

#### The Age Calculator

Current Year: 2015 Birth Year: 1997

They are either 18 or 19 years old

# 27. The Lifetime Supply Calculator

Ever wonder how much a "lifetime supply" of your favorite snack is? Wonder no more!

- Write a function named calculateSupply that:
  - o takes 2 arguments: age, amount per day.
  - calculates the amount consumed for rest of the life (based on a constant max age).
  - outputs the result to the screen like so: "You will need NN to last you until the ripe old age of X"
- Call that function three times, passing in different values each time.
- **Bonus**: Accept floating point values for amount per day, and round the result to a round number.

#### The Lifetime Supply Calculator

Favorite Snack: Oreo biscuits

Current Age: 15

Estimated Maximum Age: 85 Amount of snacks per day: 2

You will need 140 Oreo biscuits to last you until the ripe old age of 85

#### The Lifetime Supply Calculator

Favorite Snack: Oreo biscuits

Current Age: 20

Estimated Maximum Age: 85 Amount of snacks per day: 2.5

You will need 162 Oreo biscuits to last you until the ripe old age of 85

#### 28. The Geometrizer

Create 2 functions that calculate properties of a circle, using the definitions here.

# Create a function called calcCircumference:

- Pass the radius to the function.
- Calculate the circumference based on the radius, and output "The circumference is NN".

#### Create a function called calcArea:

- Pass the radius to the function.
- Calculate the area based on the radius, and output "The area is NN".

# 29. The Temperature Converter

It's hot out! Let's make a converter based on the steps here.

Create a function called celsiusToFahrenheit:

- Store a celsius temperature into a variable.
- Convert it to fahrenheit and output "NN°C is NN°F".

#### Create a function called fahrenheitToCelsius:

- Now store a fahrenheit temperature into a variable.
- Convert it to celsius and output "NN°F is NN°C."

