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:
  - takes 2 arguments: birth year, current year.
  - 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:
  - 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."

-- END --