Presidential Initiative for Artificial Intelligence and Computing (PIAIC)

Blockchain Specialist Program
Quarter 2
JavaScript Programming Assignment 5

Note: Check Rules end of document

1. Write a function that computes the factorial of a number

   Examples:

factorial(8)	⟶	40320
factorial(5)	⟶	120
factorial(9)	⟶	362880

2. Write a function that calculates the area of a rectangle.
   A = width * height
   Pass width and height in following manner:
   i. Arguments as value
   ii. Arguments as variables

3. Write a JavaScript function that checks whether a passed string is a palindrome or not?   A palindrome is the word, phrase, or sequence that reads the same backward as forward, e.g., madam, Tibit.

4. **The Geometrizer**

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

Create a function called calcCircumference:
  a. Pass the radius to the function.
  b. Calculate the circumference based on the radius, and output "The circumference is NN".
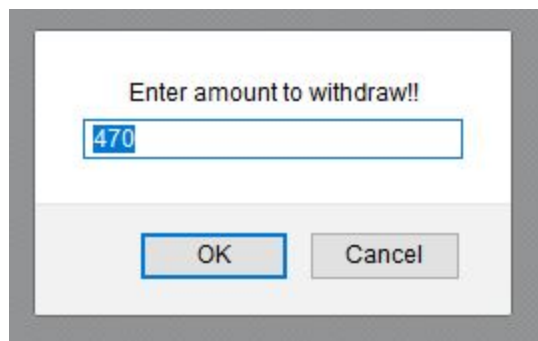
Create a function called calcArea:
  a. Pass the radius to the function.
  b. Calculate the area based on the radius, and output "The area is NN".

$$\text{Circumference of circle} = 2\pi r$$
$$\text{Area of circle} = \pi r^2$$

5. A cashier has currency notes of denominations 10, 50 and 100. If the amount to be withdrawn is input through the keyboard in hundreds, find the total number of currency notes of each denomination the cashier will have to give to the withdrawer.

Enter amount to withdraw!!

470

OK   Cancel

You will have 4 hundred notes 1 fifty notes 2 ten notes.

6. Write a function that will take an array and generate a mirror array of it.

mirror([0,5,6,7]) → [0,5,6,7,7,6,5,0]

mirror([1,2,3,4]) → [1,2,3,4,4,3,2,1]

7. Write a function to test whether a given date is a weekend? If not how many days to weekend

> isWeekend('Oct 12, 2019') → "Its Weekend"
>
> isWeekend('Oct 09, 2019') → "Sorry! wait for 2 more days"

8. Write a function that take birth date and returns Age in years, months and days

> calculateAge('Sep 01, 1979') → "You are 40 years, 1 month and 11 days old"
>
> calculateAge('Aug 09, 1986') → "You are 33 years, 2 months and 4 days old"

9. Write a function to add weeks in current date

> addWeek(3) → "2 November 2019"
>
> addWeek(10) → "21 December 2019"

10. Write a JavaScript function that accept string and returns the count of vowel used within the string.

11. Write a JavaScript function named isVowel that accept string character and check using switch statement that character is a vowel or not. Function should return true if its vowel and false if it's not vowel

12. Write a JavaScript program act as number guessing game and give user chance to try 3 times if guess incorrect and then ask user if he/she wants to play game again
    a. Generate Random number between 1 to 100
    b. Ask user to guess number
    c. User will have 3 chances, if user enters incorrect number it should say that "Incorrect, Please try again"
    d. If user guess right on first, second or third try is should say "You are right, You won"
    e. Then it asks the user if he/she wants to play again, if user says yes, then the whole process starts from point (a) again
    f. If user says no then game end saying "Thank you for playing with use today"
    g. After point (c) if user failed 3 times then it should say "You Lose" and game should ask if user wants to play again, if user say yes then it should start from point (a) again.

    Note: You must use while or do while loop and functions for this
game

Rules for Assignment completion and submission

1) Each task should be in separate file
2) Files name should be the task name e.g task1, task2, task 3
    a) task1.html
    b) task1.js
3) You should upload your code on GitHub or google drive and share link for code review
4) All files in assignment should be in one folder and folder name should contains assignment number e.g assignment1, assignment2
    a) Create a folder
    b) Add all tasks file in this assignment folder
    c) Push code on github or upload folder on google drive
    d) Share github url or drive url for code review