Exercises

1. Write a program where the program takes a random integer between 1 to 10, the user is then prompted to input a guess number. If the user input matches with guess number, the program will display a message "Good Work" otherwise display a message "Not matched".
2. Write a program to calculate days left until next Christmas.
3. Write a program to calculate multiplication and division of two numbers (input from user). 2 inputs 2 buttons (multiply/divide)
4. Write a program to convert temperatures to and from Celsius, Fahrenheit.
5. Write a program to get the difference between a given number and 13, if the number is greater than 13 return double the absolute difference.
6. Write a program to compute the sum of the two given integers. If the two values are same, then returns triple their sum.
7. Write a program to check two given numbers and return true if one of the number is 50 or if their sum is 50.
8. Write a program to check a given integer is within 20 of 100 or 400.
9. Write a program to check from two given integers, if one is positive and one is negative.
10. Write a program to create a new string adding "Py" in front of a given string. If the given string begins with "Py" then return the original string.
11. Write a program to create a new string from a given string changing the position of first and last characters. The string length must be greater than or equal to 1.
12. Write a program check if a given positive number is a multiple of 3 or a multiple of 7.
13. Write a program to create a new string from a given string taking the last 3 characters and added at both the front and back. The string length must be 3 or more.
14. Write a program to check if a string starts with 'Java' and false otherwise.
15. Write a program to check if two given integer values are in the range 50..99 (inclusive). Return true if either of them are in the said range.
16. Write a program to test if an array of integers of length 2 contains 1 or a 3
17. Write a program to concatenate two strings and return the result. If the length of the strings are not same then remove the characters from the longer string.
18. Write a program to test if a string end with "Script". The string length must be greater or equal to 6.
19. Write a program to display the city name if the string begins with "Los" or "New" otherwise return blank.

20. Write a program to test if a given array of integers contains 30 or 40 twice.
21. Write a program to reverse the elements of a given array of integers length 3.
22. Write a program to rotate the elements left of a given array of integers of length 3.
23. Write a program to check if a given string contains equal number of p's and t's present.
24. Write a program to convert a given number to hours and minutes.
25. Write a function that reverse a number. Example x = 32243; Expected Output : 34223
26. Write a 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 or nurses run.
27. Write a function that generates all combinations of a string. Example string : 'dog' Expected Output : d,do,dog,o,og,g
28. Write a function that returns a passed string with letters in alphabetical order. Example string : 'webmaster' Expected Output : 'abeemrstw' Assume punctuation and numbers symbols are not included in the passed string.
29. Write a 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 '
30. Write a function that accepts a string as a parameter and find the longest word within the string. Example string : 'Web Development Tutorial' Expected Output : 'Development'
31. Write a function that accepts a string as a parameter and counts the number of vowels within the string. Note : As the letter 'y' can be regarded as both a vowel and a consonant, we do not count 'y' as vowel here. Example string : 'The quick brown fox' Expected Output : 5
32. Write a function that accepts a number as a parameter and check the number is prime or not. Note : A prime number (or a prime) is a natural number greater than 1 that has no positive divisors other than 1 and itself.
33. Write a function which will take an array of numbers stored and find the second lowest and second greatest numbers, respectively. Sample array : [1,2,3,4,5] Expected Output : 2,4
34. Write a function which says whether a number is perfect. According to Wikipedia : In number theory, a perfect number is a positive integer that is equal to the sum of its proper positive divisors, that is, the sum of its positive divisors excluding the number itself (also known as its aliquot sum). Equivalently, a perfect number is a number that is half the sum of all of its positive divisors (including itself). Example : The first perfect number is 6, because 1, 2, and 3 are its proper positive divisors, and 1 + 2 + 3 = 6. Equivalently, the number 6 is equal to half the sum of all its positive divisors: (1 + 2 + 3 + 6) / 2 = 6. The next perfect number is 28 = 1 + 2 + 4 + 7 + 14. This is followed by the perfect numbers 496 and 8128.
35. Write a function to convert an amount to coins. Sample function : amountTocoins(46, [25, 10, 5, 2, 1]) Here 46 is the amount. and 25, 10, 5, 2, 1 are coins. Output : 25, 10, 10, 1
36. Write a function to get the number of occurrences of each letter in specified string.

37. Write a function to extract unique characters from a string. Example string : "thequickbrownfoxjumpsoverthelazydog" Expected Output : "thequickbrownfxjmpsvlazydg"

38. Write a function that returns array elements larger than a number.

39. Write a function to find the first not repeated character. Go to the editor Sample arguments : 'abacddbec' Expected output : 'e'

40. Write a function to apply Bubble Sort algorithm. Note : According to wikipedia "Bubble sort, sometimes referred to as sinking sort, is a simple sorting algorithm that works by repeatedly stepping through the list to be sorted, comparing each pair of adjacent items and swapping them if they are in the wrong order". Sample array : [12, 345, 4, 546, 122, 84, 98, 64, 9, 1, 3223, 455, 23, 234, 213] Expected output : [3223, 546, 455, 345, 234, 213, 122, 98, 84, 64, 23, 12, 9, 4, 1]

41. Write a function that accept a list of country names as input and returns the longest country name as output. Sample function : Longest_Country_Name(["Australia", "Germany", "United States of America"]) Expected output : "United States of America"

42. Write a function to find longest substring in a given a string without repeating characters.