Python Practice questions1

# Practice questions on Have your own function

1. Write a function to calculate area and perimeter of a rectangle.

2.

### Write a function to calculate area and circumference of a circle.

3.

### Write a function to calculate power of a number raised to other. E.g.- ab.

4.

### Write a function to tell user if he/she is able to vote or not. ( Consider minimum age of voting to be 18. )

5.

### Print multiplication table of 12 using recursion.

**def** table(n,i):

**print** n\*i

i=i+1

**if** i<=10:

table(n,i)

table(12,1)

6. Write a function to calculate power of a number raised to other ( ab ) using recursion.

**def** power(a,b):

**if** b == 1:

**return** a

**else**:

**return** a\*power(a,b-1)

**print** power(6,2)

7. Write a function to check if a number is even or not.

8. Write a function to check if a number is prime or not.

1) Write a Python program to calculate the length of a string

def string\_length(str1):

count = 0

for char in str1:

count += 1

return count

print(string\_length('w3resource.com'))

2) Write a Python program to count the number of characters (character frequency) in a string.

Sample String : google.com'  
Expected Result : {'o': 3, 'g': 2, '.': 1, 'e': 1, 'l': 1, 'm': 1, 'c': 1}

def char\_frequency(str1):

dict = {}

for n in str1:

keys = dict.keys()

if n in keys:

dict[n] += 1

else:

dict[n] = 1

return dict

print(char\_frequency('google.com'))

3) Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself.   
Sample String : 'restart'  
Expected Result : 'resta$t'

def change\_char(str1):

char = str1[0]

str1 = str1.replace(char, '$')

str1 = char + str1[1:]

return str1

print(change\_char('restart'))

4) Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.    
Sample String : 'abc', 'xyz'  
Expected Result : 'xyc abz'

def chars\_mix\_up(a, b):

new\_a = b[:2] + a[2:]

new\_b = a[:2] + b[2:]

return new\_a + ' ' + new\_b

print(chars\_mix\_up('abc', 'xyz'))

5) Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.

Sample String : 'abc'  
Expected Result : 'abcing'  
Sample String : 'string'  
Expected Result : 'stringly'

def add\_string(str1):

length = len(str1)

if length > 2:

if str1[-3:] == 'ing':

str1 += 'ly'

else:

str1 += 'ing'

return str1

print(add\_string('ab'))

print(add\_string('abc'))

print(add\_string('string'))

6) Write a Python function that takes a list of words and returns the length of the longest one

def find\_longest\_word(words\_list):

word\_len = []

for n in words\_list:

word\_len.append((len(n), n))

word\_len.sort()

return word\_len[-1][1]

print(find\_longest\_word(["PHP", "Exercises", "Backend"]))

7) Write a Python program to change a given string to a new string where the first and last chars have been exchanged.

Ex: input: abcd o/p: dbca

Input: 12345 o/p: 52341

def change\_sring(str1):

return str1[-1:] + str1[1:-1] + str1[:1]

print(change\_sring('abcd'))

print(change\_sring('12345'))

11) Write a Python program to count the occurrences of each word in a given sentence.

o/p: {'the': 2, 'jumps': 1, 'brown': 1, 'lazy': 1, 'fox': 1, 'over': 1, 'quick': 1, 'dog.': 1}

def word\_count(str):

counts = dict()

words = str.split()

for word in words:

if word in counts:

counts[word] += 1

else:

counts[word] = 1

return counts

print( word\_count('the quick brown fox jumps over the lazy dog.'))

12) Write a Python program to count occurrences of a substring in a string

str1 = 'The quick brown fox jumps over the lazy dog.'

print()

print(str1.count("fox"))

print()

o/p: 1

13) Write a Python program to reverse a string.

def reverse\_string(str1):

return ''.join(reversed(str1))

print()

print(reverse\_string("abcdef"))

print(reverse\_string("Python Exercises."))

print()