In [2]:

```
#PYTHON - WORKSHEET 1
#Q1 to Q8 have only one correct answer. Choose the correct option to answer your question
#1. Which of the following operators is used to calculate remainder in a division?
#A) #   B) &
#C) %   D) $
#Answer
#c) %


#2. In python 2//3 is equal to?
#A) 0.666   B) 0
#C) 1   D) 0.67
#Answer:
#B) 0


#3. In python, 6<<2 is equal to?
#A) 36  B) 10
#C) 24  D) 45
#Answer:
#C) 24


#4. In python, 6&2 will give which of the following as output?
#A) 2   B) True
#C) False   D) 0
#Answer:
#A) 2


#5. In python, 6|2 will give which of the following as output?
#A) 2   B) 4
#C) 0   D) 6
#Answer:
#B) 4


#6. What does the finally keyword denotes in python?
#A) It is used to mark the end of the code
#B) It encloses the lines of code which will be executed if any error occurs while execut
#C) the finally block will be executed no matter if the try block raises an error or not.
#D) None of the above
#Answer:
#B) The finally block will executed no matter if the try block raises an error or not


#7. What does raise keyword is used for in python?
#A) It is used to raise an exception.   B) It is used to define lambda function
#C) it's not a keyword in python.   D) None of the above
#Answer:
#A) it is use to raise exception


#8. Which of the following is a common use case of yield keyword in python?
#A) in defining an iterator B) while defining a lambda function
#C) in defining a generator D) in for loop.
#Answer :
#C) in defining a generator
```

```
#Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your
#9. Which of the following are the valid variable names?
#A) _abc    B) 1abc
#C) abc2    D) None of the above
#Answer:
#A) _abc


#10.    Which of the following are the keywords in python?
#A) yield   B) raise
#C) look-in D) all of the above
#Answer:
# A) yield and B) raise
```

In [3]:

```
#11.    Write a python program to find the factorial of a number.
```

In [4]:

```
def factorial(n):
    if n == 0 or n == 1:
        return 1
    else:
        return n * factorial(n - 1)

number = int(input("Enter a number: "))
if number < 0:
    print("Factorial is not defined for negative numbers.")
else:
    result = factorial(number)
    print("Factorial of", number, "is", result)
```

```
Enter a number: 3
Factorial of 3 is 6
```

In [5]:

```
#12.    Write a python program to find whether a number is prime or composite.
```

In [34]:

```
def is_prime(n):
    if n <= 1:
        return False
    for i in range(2, int(n**0.5) + 1):
        if n % i == 0:
            return False
    return True

number = int(input("Enter a number: "))
if is_prime(number):
    print(number, "is a prime number.")
else:
    print(number, "is a composite number.")


print('                                        ')
print ('**** Lets Check another Number ****')
print('                                        ')



number2 = int(input("Enter another number: "))
if is_prime(number2):
    print(number2, "is prome number.")
else:
    print(number2,"is a composite number.")
```

```
Enter a number: 7
7 is a prime number.

**** Lets Check another Number ****

Enter another number: 8
8 is a composite number.
```

In [9]:

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#13.    Write a python program to check whether a given string is palindrome or not.
```

In [36]:

```
def is_palindrome(s):
    return s == s[::-1]

string = input("Enter a string: ")
if is_palindrome(string):
    print("The string is a palindrome.")
else:
    print("The string is not a palindrome.")

print('                                    ')
print ('**** Lets Check another String****')
print('                                    ')

string2 = input("Enter another string: ")
if is_palindrome(string2):
    print("The string is a palindrome.")
else:
    print("The string is not a palindrome.")
```

```
Enter a string: madam
The string is a palindrome.

**** Lets Check another String****

Enter another string: Good
The string is not a palindrome.
```

In [14]:

```
#14.    Write a Python program to get the third side of right-angled triangle from two gi
```

In [17]:

```
import math

def find_third_side(a, b):
    return math.sqrt(a**2 + b**2)

side1 = float(input("Enter the length of the first side: "))
side2 = float(input("Enter the length of the second side: "))
third_side = find_third_side(side1, side2)
print("The length of the third side (hypotenuse) is", third_side)
```

```
Enter the length of the first side: 3
Enter the length of the second side: 4
The length of the third side (hypotenuse) is 5.0
```

In [18]:

```
#15.    Write a python program to print the frequency of each of the characters present i
```

In [21]:

```
def count_characters(s):
    char_count = {}
    for char in s:
        if char in char_count:
            char_count[char] += 1
        else:
            char_count[char] = 1
    return char_count

string = input("Enter a string: ")
frequency = count_characters(string)
print("Character frequencies:", frequency)
```

```
Enter a string: madam
Character frequencies: {'m': 2, 'a': 2, 'd': 1}
```

In [ ]: