In [1]:
```
#PYTHON WORKSHEET 1
```

1. Which of the following operators is used to calculate remainder in a division? A) # B) & C) % D) $

C) %

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

B) 0

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

C) 24

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

A) 2

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

D) 6

1. 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 executing the lines of code in the try block. C) the finally block will be executed no matter if the try block raises an error or not. D) None of the above

C) The finally block will be executed no matter if the try block raises an error or not.

1. 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

A) It is used to raise an exception.

1. 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.

C) In defining a generator

1. Which of the following are the valid variable names? A) _abc B) 1abc C) abc2 D) None of the above

A) _abc C) abc2

1. Which of the following are the keywords in python? A) yield B) raise C) look-in D) all of the above

A) yield B) raise

1. Write a python program to find the factorial of a number.

In [ ]:
```
def factorial(n):
    if n == 0 or n == 1:
```

```
        return 1
    else:
        return n * factorial(n - 1)

num = int(input("Enter a number: "))

print("Factorial of", num, "is", factorial(num))
```

1. Write a python program to find whether a number is prime or composite.

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

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

1. Write a Python program to check whether a given string is palindrome or not:

In [ ]:
```
def is_palindrome(s):
    s = s.lower()  # Convert to lowercase for case-insensitivity
    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.")
```

1. Write a Python program to get the third side of a right-angled triangle from two given sides:

In [ ]:
```
import math

def find_third_side(side1, side2):
    return math.sqrt(side1**2 + side2**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 is:", third_side)
```

1. Write a Python program to print the frequency of each character present in a given string:

In [ ]:
```
def character_frequency(s):
    freq = {}
    for char in s:
        if char.isalnum():
            freq[char] = freq.get(char, 0) + 1
    return freq

string = input("Enter a string: ")
frequency = character_frequency(string)
print("Character frequency:")
for char, count in frequency.items():
    print(f"{char}: {count}")
```