PYTHON – WORKSHEET 1

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

   Ans: C) %

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

   Ans: B) 0

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

   Ans: C) 24

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

   Ans: A) 2

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

   Ans: D) 6

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 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

   Ans: C) the finally block will be 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

   Ans: A) It is used to raise an 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

   Ans: C) in defining a generator

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

   Ans: A) _abc
   B) 1abc

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

    Ans: A) yield
    B) raise

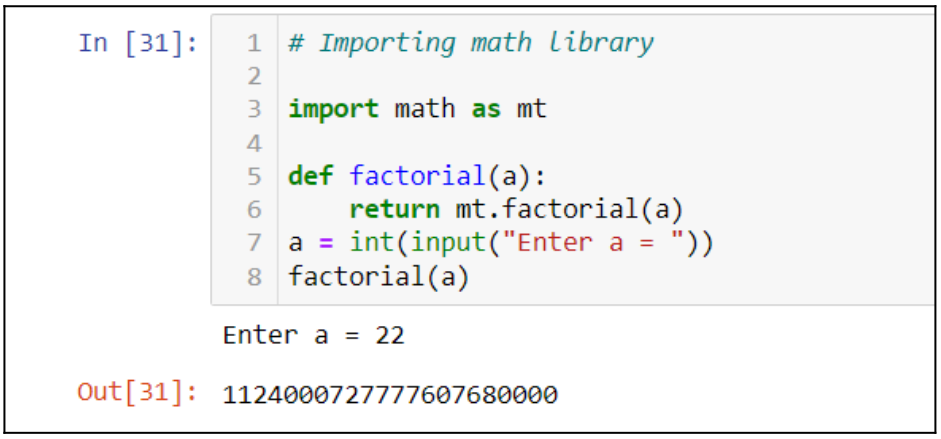
11. Write a python program to find the factorial of a number

```
# Importing math library

  import math as mt

  def factorial(a):
      return mt.factorial(a)
  a = int(input("Enter a = "))
  factorial(a)
```

 # Output
Enter a = 22
1124000727777607680000



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

```
n = int(input("Enter any number : "))
if n > 1:
   for i in range(2, n):
      if (n % i) == 0:
         print(n, "is NOT a Prime Number")
         break
   else:
       print(n, "is a Prime Number")
elif n == 0 or 1:
    print(n, "is a neither Prime NOR Composite Number")
else:
    print(n, "is NOT a Prime Number it is a COMPOSITE Number")
```

 # Output Enter any number: 22
22 is NOT a Prime Number

In [16]:

```
n = int(input("Enter any number : "))
if n > 1:
    for i in range(2, n):
        if (n % i) == 0:
            print(n, "is NOT a Prime Number")
            break
    else:
        print(n, "is a Prime Number")
elif n == 0 or 1:
    print(n, "is a neither Prime NOR Composite Number")
else:
    print(n, "is NOT a Prime Number it is a COMPOSITE Number")
```

```
Enter any number : 22
22 is NOT a Prime Number
```

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

```
def palindrome(s):
    return s == s[::-1]
s = str(input("Enter s = "))
if palindrome(s):
    print("Yes")
else:
   print("No")
```

 # Output1: Enter s = Ranganathan
No
 # Output2: Enter s = mom
Yes

In [23]:

```
def palindrome(s):
    return s == s[::-1]
s = str(input("Enter s = "))
if palindrome(s):
    print("Yes")
else:
    print("No")
```

```
Enter s = Ranganathan
No
```

In [25]:

```
def palindrome(s):
    return s == s[::-1]
s = str(input("Enter s = "))
if palindrome(s):
    print("Yes")
else:
    print("No")
```

```
Enter s = mom
Yes
```

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

```
from math import sqrt

def triangle(h):
    return sqrt(p ** 2 + b ** 2)
p = int(input("Enter p = "))
b = int(input("Enter b = "))
h = sqrt(a ** 2 + b ** 2)
triangle(h)
```

 # Output Enter p = 5
Enter b = 7
8.602325267042627

```
In [41]:
# Right-angled Triangle: A right-angled triangle is one that follows the Pythagoras Theorem
# and one angle of such triangles is 90 degrees which is formed by the base and perpendicular.
# The hypotenuse is the longest side in such triangles.

from math import sqrt

def triangle(h):
    return sqrt(p ** 2 + b ** 2)
p = int(input("Enter p = "))
b = int(input("Enter b = "))
h = sqrt(a ** 2 + b ** 2)
triangle(h)

Enter p = 5
Enter b = 7

Out[41]: 8.602325267042627
```

15. Write a python program to print the frequency of each of the characters present in a given string

```
def freq(f):
    return {i: name.count(i) for i in set(name)}
name = str(input("Enter name = "))
f = {i: name.count(i) for i in set(name)}
print("The count of letters present in name : ",freq(f))
```

 # Output Enter name = naveenkumarranganathan
The count of letters present in name : {'k': 1, 'n': 5, 't': 1, 'm': 1, 'h': 1, 'r': 2, 'v': 1, 'g': 1, 'e': 2, 'u': 1, 'a': 6}

Q15. Write a python program to print the frequency of each of the characters present in a given string

In [36]:

```
def freq(f):
    return {i: name.count(i) for i in set(name)}
name = str(input("Enter name = "))
f = {i: name.count(i) for i in set(name)}
print("The count of letters present in name : ",freq(f))
```

```
Enter name = naveenkumarranganathan
The count of letters present in name :  {'t': 1, 'v': 1, 'r': 2, 'u': 1, 'h': 1, 'e': 2, 'k': 1, 'm': 1, 'g': 1, 'n': 5, 'a':
6}
```