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) $
```

Ans: c) %

2. In python 2//3 is equal to?

```
A) 0.666                            B) 0
C) 1                                D) 0.67
```

In [1]:
```
2//3
```

Out[1]:
```
0
```

Ans: 0

3. In python, 6<<2 is equal to?

```
A) 36                               B) 10
C) 24                               D) 45
```

In [4]:
```
6<<2
```

Out[4]: 24

Ans: 24

4. In python, 6&2 will give which of the following as output?

```
A) 2                                                    B) True
C) False                                                D) 0
```

In [5]:
```
6&2
```

Out[5]: 2

Ans: 2

5. In python, 6|2 will give which of the following as output?

```
A) 2                                                    B) 4
C) 0                                                    D) 6
```

In [6]:
```
6|2
```

Out[6]: 6

Ans: 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 reises 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

Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your question.

9. Which of the following are the valid variable names?

```
A) _abc                                                    B) 1abc
C) abc2                                                    D) None of the above
```

Ans: A) _abc c) abc2

All variable names must begin with a letter of the alphabet or an underscore(_). After the first initial letter, variable names can also contain letters and numbers. Variable names are case sensitive. ... You cannot use a C++ keyword (a reserved word) as a variable name.

10. Which of the following are the keywords in python?

In [ ]:
```
A) yield                                                    B) raise
C) look-in                                                  D) all of the above
```

Ans: A) yield B) raise

Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.

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

In [35]:
```
def fact(n):
    return 1 if(n==1 or n==0)else n*fact(n-1)
num=5
print('Factorial of',num,'is',fact(num))
```

```
Factorial of 5 is 120
```

In [36]:
```
# Python  program to find
# factorial of given number
import math
def fact(n):
    return(math.factorial(n))

num = int(input("Enter the number:"))
f=fact(num)
print("Factorial of",num,"is",f)
```

```
Enter the number:6
Factorial of 6 is 720
```

In [45]:
```
num = int(input("Enter a number: "))
factorial = 1
if num < 0:
    print(" Factorial does not exist for negative numbers")
elif num == 0:

    print("The factorial of 0 is 1")
else:
       for i in range(1,num + 1):

            factorial = factorial*i
            print("The factorial of",num,"is",factorial)
```

```
Enter a number: 10
The factorial of 10 is 1
The factorial of 10 is 2
The factorial of 10 is 6
The factorial of 10 is 24
The factorial of 10 is 120
The factorial of 10 is 720
The factorial of 10 is 5040
The factorial of 10 is 40320
The factorial of 10 is 362880
The factorial of 10 is 3628800
```

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

In [88]:
```
num=int(input("Enter any Number : "))
count=0
for i in range(2,num):
    if num%i==0:
        count+=1
if count>=1:
    print(num, "is Composite Number")
else:
    print(num, "is Prime Number")
```

```
Enter any Number : 13
13 is Prime Number
```

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

In [90]:
```
# function which return reverse of a string

def isPalindrome(s):
    return s == s[::-1]
#driver code
s = "malayalam"
ans = isPalindrome(s)

if ans:
    print("Yes")
else:
    print("No")
```

```
Yes
```

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

In [91]:
```
def findHypotenuse(side1, side2):

    h = (((side1 * side1) + (side2 * side2))**(1/2));
    return h;

# Driver code
side1 = 3;
side2 = 4;

print(findHypotenuse(side1, side2));
```

```
5.0
```

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

In [95]:
```
test_str = "GeeksforGeeks"

# using naive method to get count
# of each element in string
all_freq = {}

for i in test_str:
    if i in all_freq:
        all_freq[i] += 1
    else:
        all_freq[i] = 1


# printing result
print ("Count of all characters in GeeksforGeeks is :\n " +  str(all_freq))
```

```
Count of all characters in GeeksforGeeks is :
 {'G': 2, 'e': 4, 'k': 2, 's': 2, 'f': 1, 'o': 1, 'r': 1}
```

In [97]:
```
# Python3 code to demonstrate
# each occurrence frequency using
# collections.Counter()
from collections import Counter

# initializing string
test_str = "DataTrained"

# using collections.Counter() to get
# count of each element in string
res = Counter(test_str)

# printing result
print ("Count of all characters in DataTrained is :\n "
                                            +  str(res))
```

```
Count of all characters in DataTrained is :
 Counter({'a': 3, 'D': 1, 't': 1, 'T': 1, 'r': 1, 'i': 1, 'n': 1, 'e': 1, 'd': 1})
```

In [ ]: