PYTHON WORK SHEET SET 01

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: 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

Answer: 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

Answer: 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.

Answer: 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

Answer: A) _abc , C) abc2

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, 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 [9]: n = int(input("Enter a number : "))
        fact = 1
        if n<0:
            print("No factorial possible for negative numbers")
        elif n==0:
            print("Factorial for Zero is 1")
        else:
            for i in range(1,n+1):
                fact=fact*i
            print("Factorial for ",n," is : ",fact)

        Enter a number : 10
        Factorial for  10  is :   3628800
```

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

```
In [42]: p = int(input("Enter a number : "))

         if p<=1:
             print("Its not a Prime number")

         elif p==2:
             print("Its a Prime number")

         elif p>2:
             for i in range(2,int((p/2)+2)):
                 if p%i == 0:
                     print("Its not a Prime Number")
                     break
             else:
                 print("Its a Prime Number")


         Enter a number : 27
         Its not a Prime Number
```

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

```
In [64]: a = str(input("Enter a word to check palindrome: "))

         a = a.lower()

         for i in range(0,int(len(a)/2)):
             if a[i] != a[(i*-1)-1]:
                 print("The given word ",a," is Not a Palindrome")
                 break
             else:
                 print("The given word ",a," is a Palindrome")
                 break

         Enter a word to check palindrome: Aibohphobia
         The given word  aibohphobia  is a Palindrome
```

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

```
In [75]: print("Enter two sides and other side which is to be found out as str('x'), inside pythagoras(opposite_side,adjacent_side,hypoten

         def pythagoras(opposite_side,adjacent_side,hypotenuse):
             if opposite_side == str("x"):
                 return ("Opposite = " + str(((hypotenuse**2) - (adjacent_side**2))**0.5))
             elif adjacent_side == str("x"):
                 return ("Adjacent = " + str(((hypotenuse**2) - (opposite_side**2))**0.5))
             elif hypotenuse == str("x"):
                 return ("Hypotenuse = " + str(((opposite_side**2) + (adjacent_side**2))**0.5))


         Enter two sides and other side which is to be found out as str('x'), inside pythagoras(opposite_side,adjacent_side,hypotenuse)
         and run
```

```
In [71]: pythagoras(3,4,str('x'))
Out[71]: 'Hypotenuse = 5.0'
```

```
In [72]: pythagoras(3,str('x'),5)
Out[72]: 'Adjacent = 4.0'
```

```
In [73]: pythagoras(str('x'),4,9)
Out[73]: 'Opposite = 8.06225774829855'
```

```
In [ ]:
```

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

```
In [2]: from collections import Counter

        word = input("Enter A string: ") #String without spaces, otherwise spaces will also be counted
        word = word.lower()
        print(Counter(word))

        Enter A string: Bubble Gum
        Counter({'b': 3, 'u': 2, 'l': 1, 'e': 1, ' ': 1, 'g': 1, 'm': 1})
```