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?
   ANS:-C) %(modulus operator)

2. In python 2//3 is equal to?
   ANS:-A)0.666 ~D) 0.67

3. In python, 6<<2 is equal to?
   ANS:-C) 24(11000)

4. In python, 6&2 will give which of the following as output?
   ANS:- IF bitwise "AND" Operation A)2
   For & D) 0

5. In python, 6|2 will give which of the following as output?
   ANS:-D)6

6. What does the finally keyword denotes in python?
   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?
   ANS:-A)It is used to raise an exception.

8. Which of the following is a common use case of yield keyword in python?
   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?
   ANS:-A)_abc, C) abc2

10. Which of the following are the keywords in python?
    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.
12. Write a python program to find whether a number is prime or composite.
13. Write a python program to check whether a given string is palindrome or not.
14. Write a Python program to get the third side of right-angled triangle from two given sides.
15. Write a python program to print the frequency of each of the characters present in a given string.

In [ ]:
```
# Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.
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# 13.Write a python program to check whether a given string is palindrome or not.
# 14.Write a Python program to get the third side of right-angled triangle from two
# 15.Write a python program to print the frequency of each of the characters presen
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In [3]:
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# 11.Write a python program to find the factorial of a number.
num = int(input("Enter a number: "))

factorial = 1

if num < 0:
   print("Sorry, 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 3628800
```

In [ ]:
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In [6]:
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# 12.Write a python program to find whether a number is prime or composite.
# prime number:- These numbers are only divisible by
                #1 and themselves.[2, 3, 5, 7, 11, 13]
# composite number:- 4,6,8,9,10,12

num= int(input('Enter the no.:'))
count=0
i=1
while i<=num:
    if num%i==0:
        count=count+1
    i=i+1

if count==2:
    print('It is a prime number:')
elif count>2:
    print("it's a composite number:")
else:
    print("the number is neither prime nor composite")
```

```
Enter the no.:5
It is a prime number:
```

In [13]:
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# 13.Write a python program to check whether a given string is palindrome or not.
# palindrome :-if you reverse the order of the characters in a palindrome,
            # the result will be the same as the original sequence.
#     examples:-"radar","level","madam","civic","deified","rotor"

a=input("Enter String: ")

b=a[::-1]
# or
# b=a[-1::-1]

if(a==b):
    print("Palindrome String")
```

```
else:
    print("Not Palindrome String")
```

```
Enter String: madam
Palindrome String
```

In [20]:
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# 14.Write a Python program to get the third side of right-angled triangle from two
# Pythagorean theorem:-The theorem states that in a right-angled triangle,
                       #the square of the length of the hypotenuse (c) is equal to
                       #the sum of the squares of the lengths of the other two sides


side_a = float(input("Enter the length of side A: "))
side_b = float(input("Enter the length of side B: "))

# hypotenuse = (side_a**2 + side_b**2)**0.5
# or
# import math
# hypotenuse = math.sqrt(side_a**2 + side_b**2)

print(f"The length of the hypotenuse is: {hypotenuse}")
```

```
Enter the length of side A: 3
Enter the length of side B: 4
The length of the hypotenuse is: 5.0
```

In [32]:
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# 15.Write a python program to print the frequency of each of the characters presen

str= input("Enter String:-")

l=list(str)

freq=[l.count(ele) for ele in l]

d=dict(zip(l,freq))

print(d)
```

```
Enter String:-jhgf dfghjkj dfghjk
{'j': 4, 'h': 3, 'g': 3, 'f': 3, ' ': 3, 'd': 2, 'k': 2}
```

In [ ]: