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) $

Answer (C)

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

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

Answer (B)

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

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

Answer (C)

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

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

Answer (A)

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

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

Answer(D)

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(B)

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)

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 (A)

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(D)

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

Answer (D)
Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.
11. Write a python program to find the factorial of a number.

```
i=1

j=int(input("enter any number: "))
while i<=10:
   print(j,"*",i,"=",j*i)
   i=i+1
```

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

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

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

```
def is_palindrome(string):

   string = string.replace(" ", "").lower()

   reversed_string = string[::-1]

   if string == reversed_string:
      return True
   else:
      return False

# Example usage
input_string = input("Enter a string: ")
if is_palindrome(input_string):
   print("The string is a palindrome.")
else:
   print("The string is not a palindrome.")
```

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

```
import math

def calculate_third_side(side1, side2):
    # Calculate the square of each side
    side1_squared = side1 ** 2
    side2_squared = side2 ** 2

    # Calculate the sum of the squares
    sum_of_squares = side1_squared + side2_squared

    # Calculate the square root of the sum
    third_side = math.sqrt(sum_of_squares)

    return third_side

# Example usage
side1 = float(input("Enter the length of side 1: "))
side2 = float(input("Enter the length of side 2: "))

third_side = calculate_third_side(side1, side2)
print("The length of the third side is:", third_side)
```

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

```
def count_character_frequency(string):
    frequency = {}

    # Count the frequency of each character
    for char in string:
        if char in frequency:
            frequency[char] += 1
        else:
            frequency[char] = 1

    # Print the frequency of each character
    for char, count in frequency.items():
        print(f"Character '{char}' occurs {count} time(s)")

# Example usage
input_string = input("Enter a string: ")
count_character_frequency(input_string)
```