

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) 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.

Answer:-

```
# To take input from the user
num = int(input("Enter a number: "))

factorial = 1

# check if the number is negative, positive or zero
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)
```

Output: - Enter a number: 5

The factorial of 5 is 120

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

Answer:-

```
from math import sqrt

# Number to be checked for prime
n = int(input("Enter a number: "))

flag = 0

if(n > 1):
    for k in range(2, int(sqrt(n)) + 1):
        if (n % k == 0):
            flag = 1
            break
    if (flag == 0):
        print(n," is a Prime Number!")
    else:
        print(n," is Not a Prime Number!")
else:
    print(n," is Not a Prime Number!")
```

Output: -Enter a number: 7

7 is a Prime Number!

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

Answer:-

#function which return reverse of a string

```
def isPalindrome(s):  
    return s == s[::-1]
```

Driver code

```
s = "madam"  
ans = isPalindrome(s)
```

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

Output: -Yes

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

Answer:-

```
from math import sqrt  
print("Input lengths of shorter triangle sides:")  
a = float(input("a: "))  
b = float(input("b: "))  
c = sqrt(a**2 + b**2)  
print("The length of the hypotenuse is:", c )
```

Output: -Input lengths of shorter triangle sides:
a: 3
b: 2
The length of the hypotenuse is: 3.605551275463989

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

Answer:-

```
# Python code to demonstrate each occurrence frequency using  
# collections.Counter()  
from collections import Counter  
  
# initializing string  
test_str = "malayalam"  
  
# using collections.Counter() to get count of each element in string  
res = Counter(test_str)  
  
# printing result  
print("Count of all characters in "+ test_str +" is :\n "  
      +str(res))
```

Output: -Count of all characters in malayalam is :
Counter({'a': 4, 'm': 2, 'l': 2, 'y': 1})