

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?

C) %

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

B) 0

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

C) 24

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

A) 2

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

D) 6

6. What does the finally keyword denotes in python?

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.

8. Which of the following is a common use case of yield keyword in python?

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`

C) `abc2`

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

A) `yield` B) `raise`

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

```
def factorial(n):  
  
    if n == 0:  
        return 1  
  
    return n * factorial(n-1)  
  
num = 8;  
print("Factorial of", num, "is",  
factorial(num))
```

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

```
num = 14  
  
if num > 1:  
  
    for i in range(2, int(num/2)+1):  
  
        if (num % i) == 0:  
            print(num, "is not a prime number")  
            break  
    else:  
        print(num, "is a prime number")  
  
else:  
    print(num, "is a composite number")
```

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

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

```
ans = isPalindrome(s)
```

```
if ans:
    print("It is a palindrome")
else:
    print("Not a palindrome")
```

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

```
import math as mt
```

```
# Function to calculate cos
```

```
# value of angle c
```

```
def cal_cos(n):
```

```
    accuracy = 0.0001
```

```
    x1, denominator, cosx, cosval = 0, 0, 0, 0
```

```
    # Converting degrees to radian
```

```
    n = n * (3.142 / 180.0)
```

```
    x1 = 1
```

```
    # Maps the sum along the series
```

```
    cosx = x1
```

```
    # Holds the actual value of sin(n)
```

```
    cosval = mt.cos(n)
```

```
    i = 1
```

```
    while (accuracy <= abs(cosval - cosx)):
```

```
        denominator = 2 * i * (2 * i - 1)
```

```
        x1 = -x1 * n * n / denominator
```

```
        cosx = cosx + x1
```

```
        i = i + 1
```

```
    return cosx
```

```
# Function to find third side
```

```
def third_side(a, b, c):
```

```
    angle = cal_cos(c)
```

```
    return mt.sqrt((a * a) +
```

```
        (b * b) - 2 * a * b * angle)
```

```
a, b = 5, 8  
print(third_side(a, b, c))
```

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

```
test_str = "My name is Snehal"
```

```
all_freq = {}
```

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

```
print ("Count of all characters in given string is :\n "  
      + str(all_freq))
```