WORKSHEET

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) $

ANS: %

2. In python 2//3 is equal to?
A) 0.666 B) 0 C) 1 D) 0.67

ANS: 1

3. In python, 6<<2 is equal to?
A) 36 B) 10 C) 24 D) 45

ANS: 24

4. In python, 6&2 will give which of the following as output?
A) 2 B) True C) False D) 0

ANS: 2

5. In python, 6|2 will give which of the following as output?
A) 2 B) 4 C) 0 D) 6

ANS: 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

ANS: C

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

ANS: 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.

ANS: C

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

ANS: A , C

10. Which of the following are the keywords in python?
A) yield B) raise

C) look-in D) all of the above

ANS: A , B

Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.

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

```
#Initialize the required variables
fact=1
#Take the input form user
num=int(input("Enter the number: "))
#Check whether the number is positive, negative or zero
if num<0:
   print("Cannot find factorial of negative numbers")
elif num==0:
   print("Factorial of zero is : 1")
else:
   for i in range(1,num+1):
      fact=fact*i
   print("The factorial of", num ,"is =" ,fact)
```

OUTPUT:

```
Enter the number: 7
The factorial of 7 is = 5040
```

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

```
#Write a python program to find whether a number is prime or composite.
#Take input form user
num=int(input("Enter a number: "))
if num==1:
   print(num," is Neither Prime nor Composite")
elif num==2:
   print(num,"is a prime number")
else:
   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")
print("----------The END----------")
```

OUTPUT:

```
1) Enter a number: 1
    1  is Neither Prime nor Composite
    ----------The END----------
2) Enter a number: 17
    17 is a prime number
   ----------The END----------
3) Enter a number: 10
   10 is not a prime number
   ----------The END----------
```

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

```
#Python program to check whether a given string is palindrome or not
#Take the input from user
str1=input("Enter the string :")
print("The entered string is :",str1)
#Reverse the string using slicing and indexing
rev=str1[-1::-1]
print("The reversed string is :",rev)
#Check whether the reversed string and original string are same
if rev==str1:
    print("The string is a palindrome")
else:
    print("The string is NOT a palindrome")
```

OUTPUT:

```
1)Enter the string :bombay
   The entered string is : bombay
   The reversed string is : yabmob
   The string is NOT a palindrome

2) Enter the string :gadag
   The entered string is : gadag
   The reversed string is : gadag
   The string is a palindrome
```

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

```
#Python program to get the third side of right-angled triangle from two given sides.
from math import sqrt
#Take input from user
a=float(input("Enter the side a :"))
b=float(input("Enter the side b:"))
#calculate the third side using formula: c2=a2+b2---->c=sqrt(a2+b2)
c=sqrt(a**2+b**2)
print(f"The length of hypotenuse is= ",c)
```

OUTPUT:

```
Enter the side a :25.8
Enter the side b:28.4
The length of hypotenuse is=  38.36925852814985
```

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

```
#python program to print the frequency of each of the characters present in a given string
#take input from user
string1=input("Enter any string: ")
#initialize variables as required
freq={}
for i in string1:
   if i in freq:
      freq[i]+=1
   else:
      freq[i]=1
#Display the output
print("The frequency of each character present in the string is as follows:",freq)
```

OUTPUT:

```
 1) Enter any string: Welcome to python class
The frequency of each character present in the string is as follows: {'W': 1, 'e': 2
, 'l': 2, 'c': 2, 'o': 3, 'm': 1, ' ': 3, 't': 2, 'p': 1, 'y': 1, 'h': 1, 'n': 1, 'a
': 1, 's': 2}

 2) Enter any string: Good Luck!!
The frequency of each character present in the string is as follows: {'G': 1, 'o': 2
, 'd': 1, ' ': 1, 'L': 1, 'u': 1, 'c': 1, 'k': 1, '!': 2}
```
