WORKSHEET-1

**PYTHON**

# 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?
   1. # B) &

C) % D) $

Answer: (C)

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

A) 0.666 B) 0

C) 1 D) 0.67

Answer : (A)

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

A) 36 B) 10

C) 24 D) 45

Answer: (A)

1. In python, 6&2 will give which of the following as output?
   1. 2 B) True

C) False D) 0

Answer: (D)

1. In python, 6|2 will give which of the following as output?
   1. 2 B) 4

C) 0 D) 16

Answer: (C)

1. What does the finally keyword denotes in python?
   1. It is used to mark the end of the code
   2. It encloses the lines of code which will be executed if any error occurs while executing the lines of code in the try block.
   3. the finally block will be executed no matter if the try block raises an error or not.
   4. None of the above

Answer: (C )

1. What does raise keyword is used for in python?
   1. 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)

1. Which of the following is a common use case of yield keyword in python?
   1. in defining an iterator B) while defining a lambda function

C) in defining a generator D) in for loop.

Answer: (D)

# Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your question.

1. Which of the following are the valid variable names?
   1. \_abc B) 1abc

C) abc2 D) None of the above

Answer: (D)

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

C) look-in D) all of the above

Answer: (A) (B)

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

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

Program:

# Python program to find the factorial of a number provided by the user.

# change the value for a different result

num = 7

# 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**

The factorial of 7 is 5040

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

Program:

# Program to check if a number is prime or not

num = 407

# To take input from the user

#num = int(input("Enter a number: "))

# prime numbers are greater than 1

if num > 1:

# check for factors

for i in range(2,num):

if (num % i) == 0:

print(num,"is not a prime number")

print(i,"times",num//i,"is",num)

break

else:

print(num,"is a prime number")

# if input number is less than

# or equal to 1, it is not prime

else:

print(num,"is not a prime number")

**Output**

407 is not a prime number

11 times 37 is 407

Program 2:

|  |
| --- |
| # Python program to check if  # given number is prime or not    num = 11    # If given number is greater than 1  if num > 1:       # Iterate from 2 to n / 2     for i in range(2, num):           # If num is divisible by any number between         # 2 and n / 2, it is not prime         if (num % i) == 0:             print(num, "is not a prime number")             break     else:         print(num, "is a prime number")    else:     print(num, "is not a prime number") |

**Output:**

11 is a prime number

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

Program:

# Program to check if a string is palindrome or not

my\_str = 'aIbohPhoBiA'

# make it suitable for caseless comparison

my\_str = my\_str.casefold()

# reverse the string

rev\_str = reversed(my\_str)

# check if the string is equal to its reverse

if list(my\_str) == list(rev\_str):

print("The string is a palindrome.")

else:

print("The string is not a palindrome.")

**Output**

The string is a palindrome.

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

Program:

def pythagoras(opposite\_side,adjacent\_side,hypotenuse):

if opposite\_side == str("x"):

return ("Opposite = " + str(((hypotenuse\*\*2) - (adjacent\_side\*\*2))\*\*0.5))

elif adjacent\_side == str("x"):

return ("Adjacent = " + str(((hypotenuse\*\*2) - (opposite\_side\*\*2))\*\*0.5))

elif hypotenuse == str("x"):

return ("Hypotenuse = " + str(((opposite\_side\*\*2) + (adjacent\_side\*\*2))\*\*0.5))

else:

return "You know the answer!"

print(pythagoras(3,4,'x'))

print(pythagoras(3,'x',5))

print(pythagoras('x',4,5))

print(pythagoras(3,4,5))

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Sample Output:

Hypotenuse = 5.0

Adjacent = 4.0

Opposite = 3.0

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

Program:

Input : str[] = "Apple Mango Orange Mango Guava Guava Mango"

Output : frequency of Apple is : 1

frequency of Mango is : 3

frequency of Orange is : 1

frequency of Guava is : 2

Input : str = "Train Bus Bus Train Taxi Aeroplane Taxi Bus"

Output : frequency of Train is : 2

frequency of Bus is : 3

frequency of Taxi is : 2

frequency of Aeroplane is : 1

# Python code to find frequency of each word

def freq(str):

# break the string into list of words

str = str.split()

str2 = []

# loop till string values present in list str

for i in str:

# checking for the duplicacy

if i not in str2:

# insert value in str2

str2.append(i)

for i in range(0, len(str2)):

# count the frequency of each word(present

# in str2) in str and print

print('Frequency of', str2[i], 'is :', str.count(str2[i]))

def main():

str ='apple mango apple orange orange apple guava mango mango'

freq(str)

if \_\_name\_\_=="\_\_main\_\_":

main() # call main function