Python Worksheet

worksheet-1

May 11, 2023

```
[ ]: # 1) Which of the following operators is used to calculate remainder in a␣
      ↪division?
     #Answer c)%
     x = 5
     y = 2

     print(x % y)
```

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[ ]: # 2) In python 2//3 is equal to?
     #Answer b)0
     x = 2
     y = 3

     print(2//3)
```

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[ ]: # 3) In python, 6<<2 is equal to?
     #Answer c)24
     x = 6
     x <<= 2

     print(6<<2)
```

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[ ]: # 4) In python, 6&2 will give which of the following as output
     #Answer a)2
     print(6&2)
```

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[ ]: # 5) In python, 6|2 will give which of the following as output?
     #Answer d)6
     print(6|2)
```

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[ ]: # 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

     a = input("Give the first value: ")
     b = input("Give the second value: ")
     try:
```

```python
    if(a > b):
        print("Greater than value")
      else:
        print("Lesser than value")
except:
    print("Something went wrong")
finally:
    print("The 'try except' is finished")
```

```python
# 7) What does raise keyword is used for in python
#Answer a)It is used to raise an exception
x = int(input("Please enter the number: ")) # enter number less than 11

if x < 11:
    raise Exception("Sorry, number is below 11")
else:
    print(x)
```

```python
# 8) Which of the following is a common use case of yield keyword in python?
#Answer a)in defining an iterator
#When you create a list, you can read its items one by one. Reading its items
  ↪one by one is called iteration
mylist = [1, 2, 3]
for i in mylist:
    print(i)
```

```python
# 9) Which of the following are the valid variable names?
#Answer a) _abc and c)abc2

# 10) Which of the following are the keywords in python?
#Answer a) yield and b) raise
```

```python
# 11) Write a python program to find the factorial of a number.
#Factorial of a number is the sum of the multiplication, of all the whole
  ↪numbers, from our specified number down to 1
#Factorial of a non-negative integer, is multiplication of all integers smaller
  ↪than or equal to n

import math
#math.factorial(x)
#Required. A positive integer. If the number is negative, or not an integer, it
  ↪returns a ValueError.
#If the value is not a number, it returns a TypeError

math.factorial(6) #6*5*4*3*2*1=720
math.factorial(4) #4*3*2*1=24
```

```python
# 12) Write a python program to find whether a number is prime or composite.
#prime number is the number where the number do not have any other factors like
 ↪2,3,5,7
#composite numbers are 4,6,8 as 2*2=4, 3*2=6, 4*2=8

num = int(input("Please enter the number: "))
if num > 1:
    for i in range(2,int(num/2)):
        if(num%i) == 0:
            print(str(num) + " is Composite")
            break;
    else:
        print(str(num) + " is Prime")
```

```python
# 13) Write a python program to check whether a given string is palindrome or
 ↪not.
#A palindrome is a word, phrase, or sequence that is the same spelled forward
 ↪as it is backward.
n = input("Enter the word: ")
text = n
print(text[::-1])

if text == text[::-1]:
    print("It's a palindrome")
else:
    print("This is not a palindrome")
```

```python
#palindrome
word = input("Please enter the word/phrase: ")
word_lower = word.lower().replace(" ", " ")
print(word_lower)

if word_lower == word_lower[::-1]:
    print("It's a palindrome")
else:
    print("This is not a palindrome")
```

```python
# 14) Write a Python program to get the third side of right-angled triangle
 ↪from two given side
#Program to find the Third Angle of a Triangle if we have two angles
#Sum of all the angles of triangles is 180°
a = float(input("Enter the First Angle of a Triangle: "))
b = float(input("Enter the Second Angle of a Triangle: "))
c = 180 - (a + b)
print("Third Angle of a Triangle = ", c)
```

```python
# 15) Write a python program to print the frequency of each of the characters␣
 ↪present in a given string.
#Count of each characters in the word
char = input("Enter the Characters: ")
test_str = char

# create empty dictionarie
dic = {}

for keys in test_str:
    dic[keys] = dic.get(keys, 0) + 1
    #print(dic[keys])

print("Count of all characters in " + test_str + " is: \n" + str(dic))
```