Day 02 python programs

CSA0818

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#01

Progrm to print right triangle

Code:

```python
rows = 5
for i in range(0, rows):
for j in range(0, i + 1):
print("*", end=' ')
print("\r")
```

sample

input: 5

output:

```
*
* *
* * *
* * * *
* * * * *
```

#02

Progrm to print left triangle

Code:

```
rows = 5
for i in range(0, rows):
    for j in range(0, i + 1):
        print("*", end=' ')
    print("\r") sample
```

input:5
output:
```
*
* *
* * *
* * * *
* * * * *
```

#03

Program to print pascal triangle

Code:

```python
def print_pascal_triangle(n):
    for line in range(1, n + 1):
        C = 1
        for i in range(1, line + 1):
            print(C, end=" ")
            C = C * (line - i) // i
        print()

# Number of rows for Pascal's Triangle
rows = 5
print_pascal_triangle(rows)
```

sample input:5

output:

```
1
1 1
1 2 1
1 3 3 1
 1 4 6 4 1
```

#04

Program to remove duplicate elements in the list

Code:

```
A=[1,2,3,3,2,1,2,3,3,3,4,3,2,4]
B=set(a)
C=list(b)
Print(c)
```

sample

input: A=[1,2,3,3,2,1,2,3,3,3,4,3,2,4]

output: c=[1,2,3,4]

#05

Programe to print the duplicate elements and how many times its repeated

Code:

```python
a=[1,2,3,4,5,5,3,3,2,2]
b=set(a)
for i in b:
count=a.count(i)
if count>1:
print(f"{i} is present {count}times")
```

sample

input: a=[1,2,3,4,5,5,3,3,2,2]

output:

2 is present 3times

3 is present 3times

5 is present 2times

#06

Program   to frequency of characters in a given string

Code:

```
inpu="sssrrrrmamam"
count={i:inpu.count(i) for i in inpu}
print(count)
```

sample

input:

```
inpu="sssrrrrmamam"
```
output:

{'s': 3, 'r': 4, 'm': 3, 'a': 2}

#07

Program to reverse a string using slicing

Code:

```
A="sarmash vali"
B=a[::-1]
Print(b)
```

input: A="sarmash vali"

output: ilav hsamras

#08

Progrm to concanate two strings without using + symbol

Code:

```
str1 = "Hello, "
str2 = "World!"
concatenated_string = str1.join([str2])
print(concatenated_string)
```

input:

str1 = "Hello, "

str2 = "World!"

output: Hello World

#09

Program checking valid email

Code:

```
s=input("enter your email\n")
if '@' in s and "email.com" in s:
print(f"{s} is a valid email")
else:
print(f"{s} is not valid email")
```

input:

ssvssv453@email.com

output:

ssvssv453@email.com is a valid email

#10

Program **to print the number of vowels and consonants present in string**

Code:

```python
def count_vowels_and_consonants(input_string):
    vowels = "aeiouAEIOU"
    vowel_count = 0
    consonant_count = 0

    for char in input_string:
        if char.isalpha():
            if char in vowels:
                vowel_count += 1
            else:
                consonant_count += 1

    return vowel_count, consonant_count

input_string = "Hello, World!"
vowels, consonants = count_vowels_and_consonants(input_string)

print("Number of vowels:", vowels)
print("Number of consonants:", consonants)
```

input:2004

output: 2004 is a leap year.