

## SOLVED QUESTIONS

1. What is a string?

Ans. A string is a sequence of characters. We can enclose characters in quotes (single, double or triple).

2. What is a range slice function in string?

Ans. Range Slice function gives the characters from the given in range using ':'.

3. What is traversing a string?

Ans. Traversing a string means accessing all the elements of the string one after the other by using the subscript/index value.

4. What is an immutable data value?

Ans. An object which holds a fixed value is termed as immutable data value. These cannot be altered, changed or modified, *for example*, numbers, strings, etc.

5. Consider the string `str="Green Revolution"`. Write statements in Python to implement the following:

- (a) To display the last four characters.
- (b) To display the starting index for the substring 'vo'.
- (c) To check whether the string contains 'vol' or not.
- (d) To repeat the string 3 times.

Ans. (a) `str[-4:]`

`'tion'`

(b) `str.find('vo')`

`8`

(c) `'vol' in str`

`True`

(d) `str*3`

`'Green RevolutionGreen RevolutionGreen Revolution'`

6. What will be the output of the following programming code?

```
x="AmaZing"
```

```
print(x[3:], "and", x[:2])
```

```
print( x[-7:], "and", x[-4:-2])
```

```
print(x[2:7], "and", x[-4:-1])
```

Ans. Zing and Am

AmaZing and Zi

aZing and Zin

7. Consider the following code:

```
STR1=input("Enter a string:")
```

```
while len(STR1)<=4:
```

```
    if STR1[-1]=='z':
```

```
        STR1=STR1[0:3]+'c'
```

```
    elif 'a' in STR1:
```

```
        STR1 = STR1[0]+'bb'
```

```
    elif not int(STR1[0]):
```

```
        STR1 = 'I'+STR1[1:]+ 'z'
```

```
    else:
```

```
        STR1=STR1+'*'
```

```
Print(STR1)
```

What will be the output produced if the input is:

(a) 1bzz

(b) abcd

Ans. (a) 1bzc\*

(b) endless loop because 'a' will always remain at index 0.

## **FILL IN THE BLANKS**

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1. A string is a \_\_\_\_\_ of characters.
2. \_\_\_\_\_ subscript helps in accessing the string from the beginning.
3. \_\_\_\_\_ subscript helps in accessing the string from the end.
4. '+' operator \_\_\_\_\_ the strings on both sides of the operator.
5. The \_\_\_\_\_ method returns the lowest index of the substring if it is found in a given string.
6. \_\_\_\_\_ function returns the exact copy of the string with the first letter in upper case.

## **ANSWERS TO FILL IN THE BLANKS**

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- |                 |             |                 |
|-----------------|-------------|-----------------|
| 1. sequence     | 2. Positive | 3. Negative     |
| 4. concatenates | 5. find()   | 6. capitalize() |

8. Write the output of the following code when executed:

```
Text="gmail@com"
l=len(Text)
ntext=""
for i in range (0,l):
    if Text[i].isupper():
        ntext=ntext+Text[i].lower()
    elif Text[i].isalpha():
        ntext=ntext+Text[i].upper()
    else:
        ntext=ntext+'bb'
print(ntext)
```

**Ans.** GMAILbbCOM

9. How many times is the word 'HELLO' printed in the following statement?

```
s='python rocks'
for ch in s[3:8]:
    print('Hello')
```

**Ans.** 5 times

10. Find the output of the following:

```
word = 'green vegetables'
print(word.find('g', 2))
print(word.find('veg', 2))
print(word.find('tab', 4, 15))
```

**Ans. Output:**

```
8
6
10
```

11. Write the word 'hello' letter by letter.

**Ans.** for ch in 'hello':

```
    print(ch)
```

**Output:**

```
h
e
l
l
o
```

12. Write a program to count the number of vowels in the string pineapple.

**Ans.** word = 'pineapple'

```
count = 0
for letter in word:
    if letter in ('i', 'u', 'a', 'e', 'o') :
        count=count+ 1
print(count)
```

**Output:**

```
4
```



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

```
Ans. str=input("Enter the String:")
l=len(str)
p=l-1
index=0
while(index<p):
    if(str[index]==str[p]):
        index=index+1
        p=p-1
    else:
        print("String is not a palindrome")
        break
else:
    print("String is a Palindrome")
```

14. Write a program that reads a line, counts the words and then displays how many words are there in the line.

```
Ans. line=input("Enter line:")
x=line.split()
cnt=0
for i in x:
    cnt=cnt+1
print(cnt)
```

15. Write a program that reads a string and then prints a string that capitalizes every alternate letter in the string,

e.g. school becomes sChOoL.

```
Ans. string=input("Enter a string:")
length = len(string)
print("original string:",string)
string2=""
for a in range(0, length):
    if a%2==0:
        string2 += string[a]
    else:
        string2 += string[a].upper()
print(string2)
```

16. Write a program that reads a line, counts how many times a substring appears in the line and then displays the count.

```
Ans. str1=input("Enter line:")
str2="is"
L=str1.split()
cnt=0
for i in L:
    if i==str2:
        cnt+=1
print("Substring is appearing:",cnt)
```

17. Write a function VowCount() in Python which takes a string as an argument; the function should count and display the occurrence of words starting with a vowel in the given string.

**Example:**

If the string content is as follows:

Updated information is simplified by official websites.

The VowCount() function should display the output as

Updated  
information  
is  
official

Vowel words: 4

**Ans.** `def VowCount():`

`cnt=0`

`str1= input("Enter a string:")`

`word=str1.split()`

`for i in word:`

`if i[0]in 'aeiou' or i[0]in 'AEIOU':`

`cnt+=1`

`print(i)`

`print("Vowel words:", cnt)`

18. Write a program that reads a string and displays the longest substring of the given string.

**Ans.** `str1=input("Enter a string:")`

`word=str1.split()`

`maxlength=0`

`maxword=""`

`for i in word:`

`x = len(i)`

`if x>maxlength and i.isalpha()==True:`

`print(i)`

`maxlength=x`

`maxword=i`

`print("Substring with maximum length is:", maxword)`

**Output:**

Enter a string: Hello Python

Hello

Python

Substring with maximum length is: Python

19. Write a program to remove vowels from a string.

**Ans.** `str1=input("Enter string:")`

`str2=""`

`for i in range(len(str1)):`

`if str1[i] not in "ieouaAOIUE":`

`str2= str2+str1[i]`

`print("Original string:", str1)`

`print("New string is:", str2)`

**Output:**

Original string : We are learning python"

New string is : W r lrng pythn"