ANSWERS ASSIGNMENT – 4

TOPICS – STRINGS AND CHARACTER IN PYTHON

1) A Python Program To Access Each Element Of A String By Forward And Reverse Orders Using While Loop.

Solution:

```
# Forward String:

string = "Hello!!"

# condition is True the break the statement
while string != 0:
    break
# print the out of loop
print(string, end=" ")

# Reverse String:

# Way 1:

string = "Hello!!"

# find the length of string
i = len(string) - 1
while i >= 0:
    # print the character
    print(string[i], end=" ")
    # decrement the i every time
    i -= 1

#Way 2:

string = "Hello!!"
i = 1
while i <= len(string):

    print(string[-i], end=" ")
    i += 1
```

2) A Python Program To Access The Characters Of A String Using While Loop.
Solution:

```
string = "Hello!!"
# find length of string
n = len(string)
i = 0

# n is greater then i
while i < n:
    # print character one by one
    print(string[i], end=" ")
    # increment the i every time
    i += 1
```

3) A Python Program To Know Whether A Substring Exists In Main String Or Not.
Solution:

```
# Way 1:

# Main String
string1 = "It is health that is real wealth and not pieces of Gold and Silver"

# Substring
string2 = "Gold and Silver"

 # check the substring present in main string or not
if string2 in string1:
    print("Sub String is present in main string ")
else:
    print("Sub string not present in main string")

# Way 2:




# take the MainString from user
string1 = input("Enter the Main String...")
# take the Substring from user
string2 = input("Enter the Sub String...")
```

```
 #use find method to check find the Substring in Main string
if string2.find(string1):
    print(" found ")
else:
    print(" not found")
# Way 3:

string1 = input("Enter the Main String...")
string2 = input("Enter the Sub String...")

if(string1.find(string2) == -1):
    print("not found")
else:
    print("found")
```

4) A Python Program To Find The First Occurrence Of Substring Exists In Given Main String.
Solution:

```
str = "I live in India, India is a great country..."

# using count method count the word present in main string
print("India is Present in string is", str.count("India"), "times")   # count
India

#using count method count the word present in main string in 1 to 15 position
print("India is Present in 0 to 15 position is", str.count("India", 0, 15), "t
imes")
print("I is present in given string is ", str.count("i"), "times")  # count i

str = "I live in India, India is a great country..."

# using find method find the position/index of India word
a = str.find("India")
print(a)
```

5) A Python Program To Find The First Occurrence Of Substring Exists In Given String Using index() Method.
Solution:

```
str = "It is health that is real wealth and not pieces of Gold and Silver"

#using index method find the position/index of health word
a = str.index("health")
print(a)
```

6) A Python Program To Display All Position Of A Substring In A Given Main String.
Solution:

```
#Way 1:

string = "I live in India, India is a great country..."
subString = "India" #India word repeated in main string

#check the how many times word present in main string
for i in range(len(string)):

    #find the position of Substring in main string using startswith method
    if string.startswith(subString, i):
        print("The starts indices of the substrings are : " + str(i))


#Way 2:
string = "I live in India, India is a great country..."
subString = "India"

# res = [i for i in range(len(string)) if string.startswith(subString, i)]
# print("The starts indices of the substrings are : " + str(res))
```

7) A Python Program To Accept And Display A Group Of Numbers.
Solution:

```
# creating an empty list

lst = []
# number of elements as input
n = int(input("Please Enter Number of Element....!!!"))
```

```
# iterating till the range
for i in range(0, n):
    ele = int(input())
    # adding the element in the list
    lst.append(ele)
print(lst)
```

8) A Python Program To Know The Type Of Character Enterd By The User.
Solution:

```
#  character as input
ch = input("please enter the your character...")

# check it is a to z or A to Z
if((ch >= 'a' and ch <= 'z') or (ch >= 'A' and ch <= 'Z')):
    print("It Given Character",ch,"is an Alphabet...")

# check it is 0 to 9
elif (ch >= '0' and ch <= '9'):
    print("It Given Character", ch, "is an Digit....")

# otherwise it is special character
else:
    print("It Given Character", ch, "is an Special Character...")
```

9) A Python Program To Sort A Group Of String Into Alphabetical Order.
Solution:

```
a = 'ZENOVW'
# sorted function return sorted list into alphabetical order
print(''.join(sorted(a)))



a = 'ZENOVW'
b = sorted(a)
print(b)
# gives list ['E', 'N', 'O', 'V', 'W', 'Z']
```

```
# sort the word from a string

# to take input from the user
str = "Hello this is an example sorting the word from string..."
print(str)
 # breakdown the string into a list of words
words = str.split()
# sort the list
words.sort()
print("Sorted Words are...")
for word in words:
     # display sorted word..
    print(word, end=" ")
```

10) A Python Program To Search For The Position Of A String In A Given Group Of String.
Solution:

```
word = "Python is an Interpreted, High-
level, General purpose programming language"

using find method:

# return the occurrence of Substring

result = word.find("High-level")
print("Substring 'High-level' found at index : ", result)

result = word.find("an")
print("Substring 'an' found at index : ", result)

using index method:

word = "Python is an Interpreted, High-
level, General purpose programming language"


 ## substring searched in programming
result = word.index("ing")
print("Substring 'ing' found at index : ", result)
```

```
## substring searched in Interpreted
result = word.index("ted")
print("Substring 'ted' found at index : ", result)
```

11) A Python Program To Find The Length Of A String Without Using Len() Function.
Solution:

```
# take input string
userString = input("Please Enter the String")
count = 0
# iterate the userString
for i in userString:
     # increment the count the every iteration
    count += 1
print(count)
```

12) A Python Program To Find The Number Of Words In A String.
Solution:

```
# initializing string.
string = "Great things never come from comfort zones.........."

print(string)  # printing original string

# #  using split(), to count the words in string
result = len(string.split())

# Printing the Result
print("Number of Words in String are : ", str(result))
```

13) A Python Program To Insert Substring In A String In A Particular Position.
Solution:

```
# initializing string
string = "The harder yor work for something, the you'll feel when you achieve
it...."
```

```
s# initializing addString
addString = "greater"

# Printing original string
print(string)

# Printing original addString
print(addString)

# initializing position
n = 39

# using slicing add substring st specific index
result = string[: 39] + addString + ' ' + string[n:]

# print result
print(result)
```