CLASS 11

CH-5 STRING MANIPULATION

QUESTIONS:

1. What do you mean by string in python?
2. What is indexing in context to Python strings? Why is it also called two-way indexing?
3. What is a string slice ? How is it useful?
4. How you can "update" an existing string ?
5. Mention the string functions and methods.
6. How are strings internally stored ?
7. What is the utility of find( ) function?
8. Can you say strings are character lists? Why? Why not?
9. Explain Parameters of str.startswith(str, beg=0,end=len(string));
10. How you can "update" an existing string ?

ANSWERS:

1. Strings are amongst the most popular types in Python. We can create them simply by characters in quotes. Python treats single quotes the same as double quotes.

   Creating strings is as simple as assigning a value to a variable. For example:

   var1 = 'Waltons Technology!'

   var2 = "Python Programming"

2. In Python strings, each individual character is! given a location number, called "index" and this process is called "indexing". Python allocates indices in two directions:

   i. in forward direction, the indexes are numbered as 0,1, 2, length-1

   ii. in backward direction, the indexes are numbered as -1, -2, -3, length. This is known as "two-way indexing".

3. A sub-part or a slice of a string, say s, can be obtained using s[n : m] where n and m are integers. Python returns all the characters at indices n, n+1, n+2,.... m-1.

   For example,: 'Oswaal Books' [1 : 4] will give 'swa'.

4. You can "update" an existing string by (re) assigning a variable to another string. The new value can be related to its previous value or to a completely different string altogether.

   Following is a simple example :

```
# !/usr/bin/python
var1 = 'Hello World!'
print"Updated String:-",var i[:6] + 'Python'
```

5.

Method	Result
str.capitalize()	To capitalize the string
str.find(sub)	To find the substring position
str.isalnum()	String consists of only alphanumeric characters
str.isalpha()	String consists of only alphabetic characters
str.islower()	String's alphabetic characters are all lower case
str.isnumeric()	String consists of only numeric characters
str.isspace()	String consists of only whitespace characters
str.istitle()	String is in title case
str.isupper()	String's alphabetic characters are all upper case
str.lstrip(char) str.rstrip(char)	Returns a copy of the string with leading/trailing characters

6. Python strings are stored in memory by storing individual characters in contiguous memory locations. For instance, if the string 'abcd123' is to be stored, all the characters will be stored in adjacent memory locations without any gap.
7. The find() function returns the lowest index of the substring if it is found in the given string or -1 instead, e.g.

   'banana'.find('a') returns 1

   'abracadabra'.find('dab') returns 6
8. Although strings are sequences of characters they are immutable and hence are not truly a character list. For e.g.

   a= 'ban'

   a[1]='c' is invalid

   where as

a=['b', 'a', 'n']

a[1] = 'c' is valid

9. str – This is the string to be checked.
   beg – This is the optional parameter to set start index of the matching boundary.
   end – This is the optional parameter to set end index of the matching boundary.
10. You can "update" an existing string by (re) assigning a variable to another string. The new value can be related to its previous value or to a completely different string altogether.

    Following is a simple example :

    ```
    # !/usr/bin/python
    var1 = 'Hello World!'
     print"Updated String:-",var i[:6] + 'Python'
    ```