str data type and string literal

What is string?
String is a collection of characters. These character can be alphabets (a-z,A-Z), digits (0-9) and special characters.
String is a non numeric data type and we cannot perform arithmetic operations.
In python string is represented in memory using “str” data type.

How to create string (OR) How to represent string value?
String is created in different ways

1. String is represented within single quotes
2. String is represented within double quotes
3. String is represented within triple quotes

Single Quotes
Within single quotes we can represent single line string
Within single quotes we can insert double quotes or we can embed double quotes

A string which consists of only alphabets is called alphabetic string.
A string which consists of alphabets, digits is called alpha numeric string.

```
>>> rollno=1
>>> rollno
1
>>> type(rollno)
<class 'int'>
>>> name='naresh'
>>> type(name)
<class 'str'>
>>> name
'naresh'
>>> course='python'
>>> type(course)
<class 'str'>
>>> course
'python'
>>> ifsc_code='HDFC00002345'
```

```
>>> ifsc_code
'HDFC00002345'
>>> vehicle_no='TS09 7788'
>>> vehicle_no
'TS09 7788'
>>> password='nit123$#'
>>> password
'nit123$#'
>>> x='10'
>>> type(x)
<class 'str'>
>>> y='python
SyntaxError: unterminated string literal (detected at line 1)
address='naresh i technologies
SyntaxError: unterminated string literal (detected at line 1)
>>> s1='python "easy" language'
>>> print(s1)
python "easy" language
>>> s2='python 'easy' langauge'
SyntaxError: invalid syntax
>>> sql='insert into emp values(101,"naresh")'
>>> print(sql)
insert into emp values(101,"naresh")
```

Double Quotes

Within double quotes we can represent single line string
Within double quotes we can embed single quotes

```
>>> name="naresh"
>>> type(name)
<class 'str'>
>>> print(name)
naresh
>>> str1="python is 'easy' language"
>>> print(str1)
python is 'easy' language
>>> str2="monty python's flying circus"
>>> print(str2)
monty python's flying circus
```

within single quotes we can embed double quotes
within double quotes we can embed single quotes

within triple single quotes or double quotes
within triple single quotes or double quotes we can represent multiline string.

```
>>> s1='''python is
high level
programming language'''
>>>print(s1)
python is
high level
programming language
>>> address='''nareshit
ameerpet
hyd-40'''
>>>print(address)
nareshit
ameerpet
hyd-40
>>> s2="""python
is programming
language"""
>>> print(s2)
python
is programming
language
>>> type(s2)
<class 'str'>
```

Note: Python does not support char data type (which represents single character value).

Escape sequences (OR) backslash character values or literals

\n	New line
\t	Horizontal tab space
\v	Vertical tab space
****	\

\’	‘
\”	“
\b	backspace

```
>>> s1='python is a \'programming\' language'
>>> print(s1)
python is a 'programming' language
>>> s2="python is a \"programming\" language"
>>> print(s2)
python is a "programming" language
>>> s3='python\njava\noracle\ndjango'
>>> print(s3)
python
java
oracle
django
>>> s4="naresh\nsuresh\nramesh"
>>> print(s4)
naresh
suresh
ramesh
>>> s5="rno\tname\tcourse\tfee"
>>> print(s5)
rno    namecourse        fee
>>> s6="\\"
>>> print(s6)
\
>>> s7="d:\\windows"
>>> print(s7)
d:\windows
```

Input and output statements

Every program required 3 things

1. Input
2. Process
3. Output

Input : input is nothing but data or information given to program. Input required source to give information or data to program. This source can be keyboard, scanner, barcode reader, disk, and database.

Process: performing operations on input data is called process.

Output: Processed information is called output or result. Output required destination

print() function

print() is a predefined function in python. This function is available in predefined program/library called built-ins.

>>> dir(__builtins__)

This function display content of __builtins__library

Default library imported by any python program is __builtins__

print() is standard output function. This function is used to print/write data inside file. This function is used to print data on console or monitor (standard output device).
Print required or print is having 5 components

1. data
2. sep
3. end
4. file
5. flush