

INTRODUCING PYTHON

CLASS VIII CH6

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CHANGING YOUR TOMORROW

LEARNING OUTCOME

➤ *Run module*

➤ *Data types of Python*

➤ *Input()*

➤ *Programs on python*

STEPS TO RUN A PROGRAM

2. Run Module/Script/Program File:

After the Python program file is created, you can run the program by following the given steps:

- Open **IDLE Python Shell**.
- Click on the **File > Open**. (If the file is already opened, you can directly follow the next step).
- Click on the **Run > Run Module** or press **F5** key.
- It will execute all the commands you have stored in a separate Python Shell window.

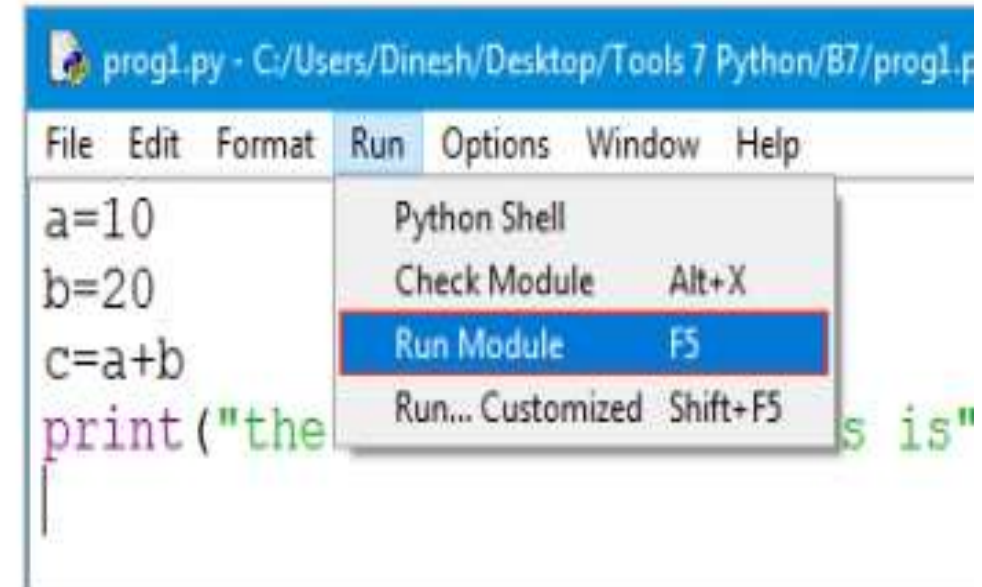


Figure 8.17: Run Module

DATA TYPES

- In python, a data type represents the types of data stored in a variable.
- The data stored in memory can be of many types.
- Python has various standard data types based on the types of value.

DATA TYPES

int (Integer): Represents integral numbers (numbers without any fractional part). There are three types of integers in Python:

Integer type	Description
Integer (int)	Stores values in the range of - 2147483648 to 2147483647.
Long Integers (long int)	Support the values that lie beyond the range of Integers.
Boolean (bool)	It represents logical values in the form of True and False . In Boolean, 0 represents False and 1 represents True.

float: Represents floating point values (numbers with fractional part). The fractional part of a floating point number may be 0 as well. Examples of floating point numbers are, 3.14, -48.6, 18.0, etc.

str (String): A String data type represents strings of characters enclosed within single or double quotation marks ('' Or ''').

Examples of strings are, 'Hello', "Myname", '218', 'Peace', etc.

Some examples of data types in Python are:

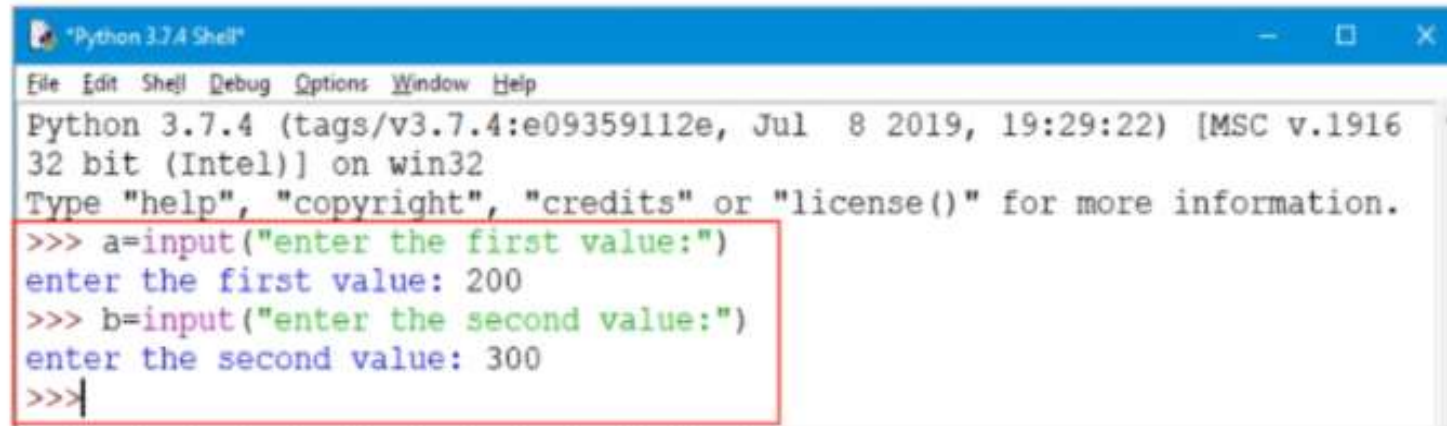
S.NO.	Value	Data Type
1.	15	int
2.	7.9	float
3.	Computer Application	str
4.	7>3	bool

INPUT FUNCTION

➤ Input() FUNCTION

`input()` function is used to accept the value for a variable from the user. To input integer and float values, we can use `int()` or `float()` along with `input()`.

Program 1:



```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916
32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> a=input("enter the first value:")
enter the first value: 200
>>> b=input("enter the second value:")
enter the second value: 300
>>>
```

Figure 8.19: Using `Input()` function

In Python, `input()` function takes one string argument. This means that whatever value is being entered by the user, it will be taken as a string argument.

SEPARATOR

Features of print() function

- The **print()** function in Python is used to print a message or value on the output device.
- It converts the message or an object into a string before writing it on the screen.
- It can have multiple parameters.
- It supports multiple escape sequences to format the output, e.g., '\n' (new line), '\t' (tab space), and '\r' (carriage return).

Using separators with print() function

Using ',' operator : When you use ',' operator as the separator among the values, the values are displayed with a space between them.

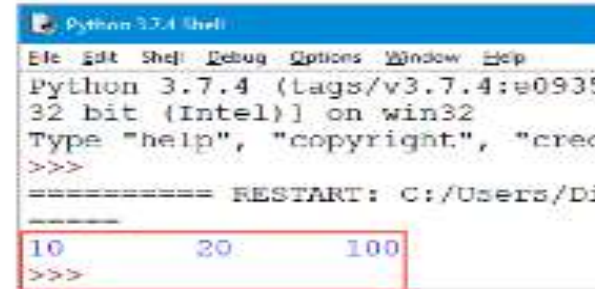
SEPARATOR USING PRINT

Program 8:



```
File Edit Format Run Options Window Help
a=10
b=20
c=100
print(a, "\t", b, "\t", c)
```

Figure 8.26: Using '\t' Escape Sequence



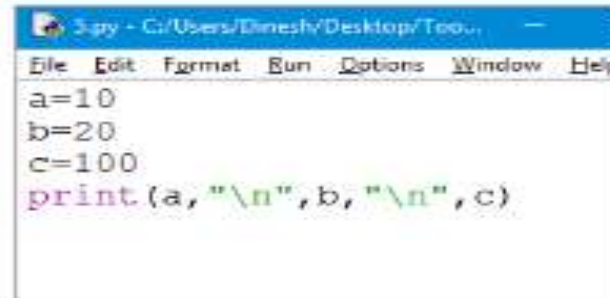
```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:00935
32 bit (Intel)) on win32
Type "help", "copyright", "cred
>>>
===== RESTART: C:/Users/Di
>>>
10      20      100
>>>
```

Output

Using '\n' (Newline character):

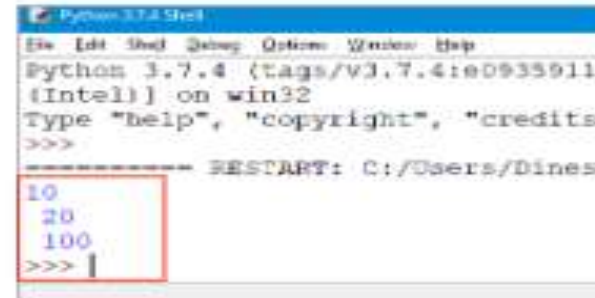
A **newline character** in Python is used to end a line and start a new line. In **Python**, the new line character can be used with the **input** function and with the **print** function. '\n' is a **newline character** used in Python.

Program 9:



```
File Edit Format Run Options Window Help
a=10
b=20
c=100
print(a, "\n", b, "\n", c)
```

Figure 8.27: Using '\n' Escape Sequence



```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:009359112
32 bit (Intel)) on win32
Type "help", "copyright", "credits"
>>>
===== RESTART: C:/Users/Dinesh
>>>
10
20
100
>>> |
```

Output

Let us consider another example. Suppose you want to make a program to accept the name, age, and marks of a student. For this, add the following code in the Python script file:

Recaptulation

The most important features of python are

- Variable is a named memory location where value can be stored. It can be changed time to time as per programming requirement.
- = is the assignment operator which is used to assign value to a variable.

A variable name must start with an alphabet or an underscore(_)

A variable name can consist of alphabets, digits, and underscore. No other character is allowed.

A Python keyword can't be used as variable name.

HOME ASSIGNMENT

- what is variable?
- What are the rules to give the name of a variable?
- Give some valid and invalid names of variable?
- Write a program to input two numbers and display sum on output screen.
- Write a program to input the radius of a circle display the area and circumference?
- Write a program to input length and breadth of a rectangle and display the area and perimeter?
- Write a program to input the basic salary of an employee and calculate 15% DA, 12% TA and 7% HRA of basic salary and calculate gross salary.

THANKING YOU
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