Lrn&Shr

LEARN PYTHON

LEARNING MODULE-1

www.clrn-shr.com

INTRODUCTION

Python is a high level language widely used for general purpose. This language was created by Guido Van Rossum and released in 1991. It is a scripting and programming language with an object oriented approach.

Python language uses English keywords and standard library is the strength of this language that can be used for the – machine learning, GUI (Graphical User Interface) applications, web frameworks, image Processing, multimedia, scientific programming etc.

FEATURES OF PYTHON

- It is interpreted as an interactive language.
- It supports object oriented style and encapsulates code within objects.
- Python programmes can run on platforms such as Windows, Linux, Macintosh etc.

- It is freely available for community users. Users can download it from www.python.org.
- Python programs can be easily integrated with languages such as C, C++, JAVA, CORBA etc.
- It automatically allocats memory to the variable at run time, hence no need to specify the data type of variable.

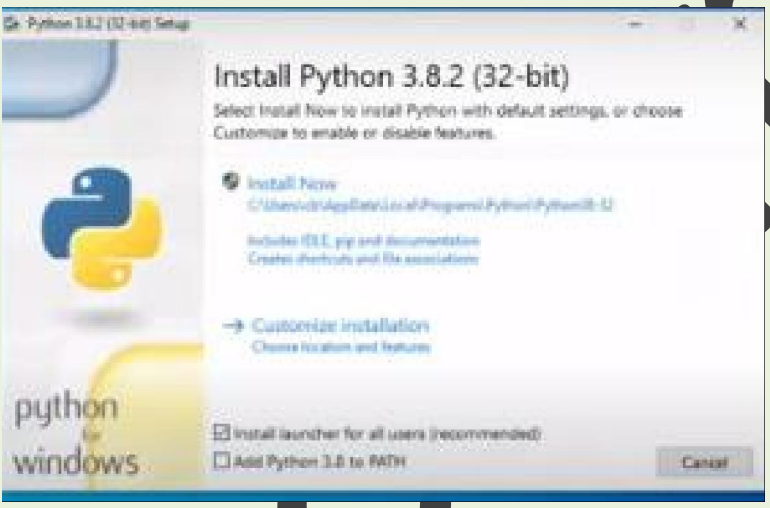
Python language is easy to learn and maintain source code. But learners should have the basic understanding of the programming concept.

INSTALL PYTHON LANGUAGE:

- Click on the link - www.python.org
- Select downloads as given in the image below and download the latest version:

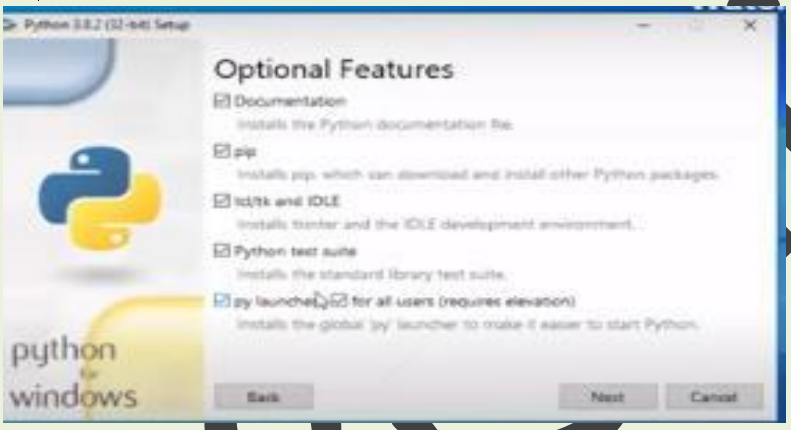
(You can select the platform as per your requirement; here description is given for Windows platform.)

- Once you click on download it starts downloading exe file as per the image below:

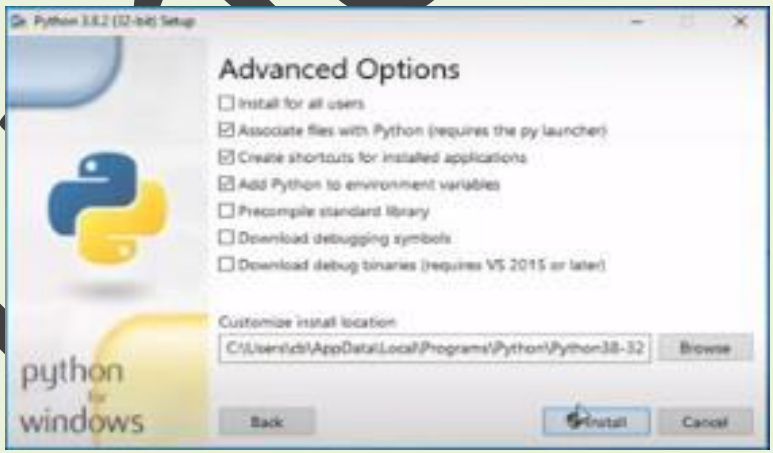


- You can find two options one is Install Now and Customize installation.
    - Install Now - option saves file by default in a location
    - Customize Installation - is the user defined location.
- You can decide anyone of the option, as per your convenience. Also click on the option – Add Python 3.8 to Path.

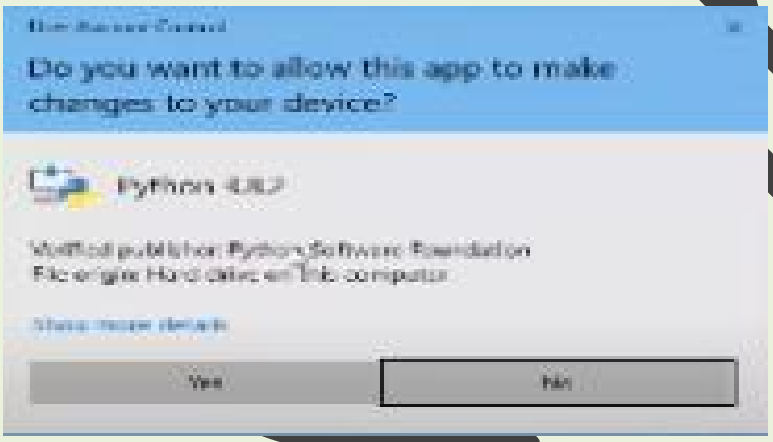
- Next Window is for optional features. Select Next button. (All options by default)



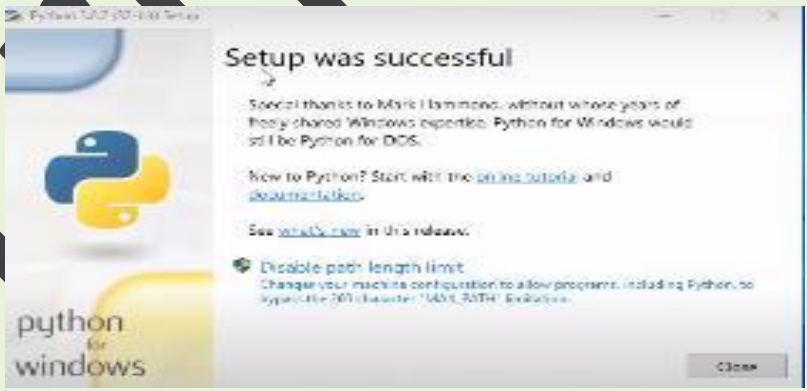
- Here write the location of the files in Customize Install Location box.
  (Example C:\Pythondirectory\\)



- Click on the option box – Install for all users and then click on Install button.
- Next, Click on Yes button.



- Finally you will get the message for successful installation as shown in the imagebelow.



START PYTHON PROGRAMMING

- Type Python program in text editor such as Notepad / Notepad++ and execute the program in Python interpreter.

Program 1:

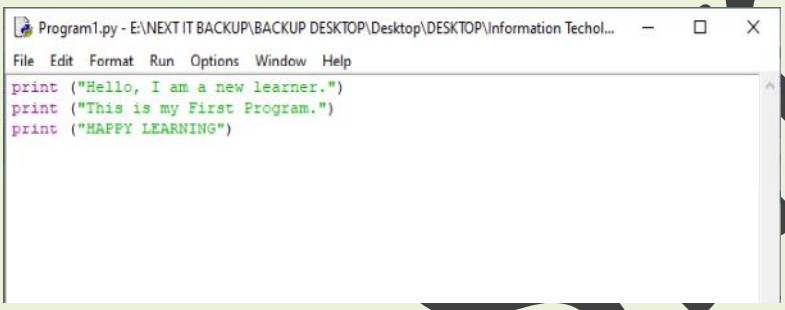
- Type the following program statements in Notepad page:

```
print ("Hello, I am a new learner.")
print ("This is my First Program.")
print ("HAPPY LEARNING")
```

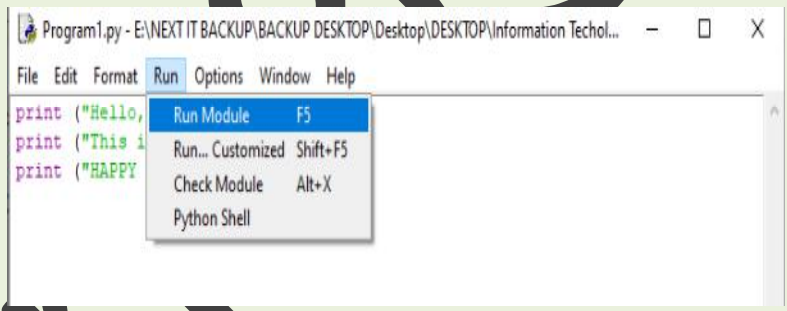
- Save the file with .py extension. – Program1.py

Execute the Program

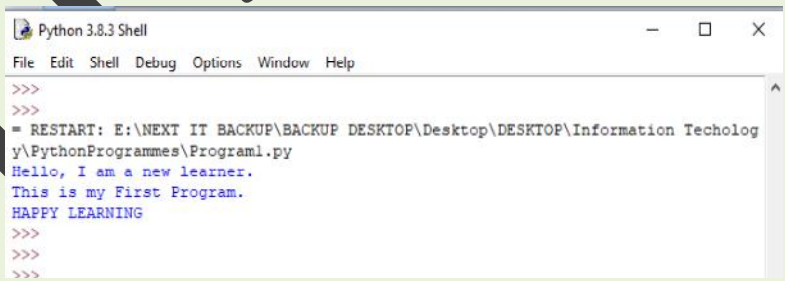
- Open file- Program1.py



- Click on Run and select Run Module.



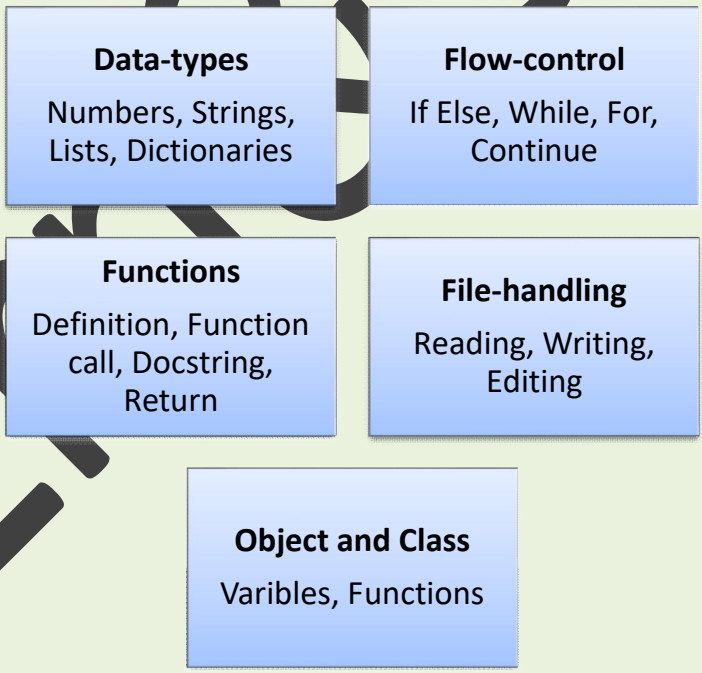
- Output Screen shown below.



PYTHON FUNDAMENTALS

There are five important fundamentals used for programming:

- Data-types
- Flow-control
- Functions
- File-handling
- Object and Class



IDENTIFIERS

An identifier is a name used to identify a variable, function, module, class or object. An identifier starts with alphabets (A to Z or a to z) or an underscore symbol (_) followed by other alphabets and numbers (0-9).

Important Note – *Python does not allow punctuation characters like @, $ and % within identifiers.*

RESERVED KEYWORDS

There are some reserved keywords which we cannot use as variable, constant or an identifier.

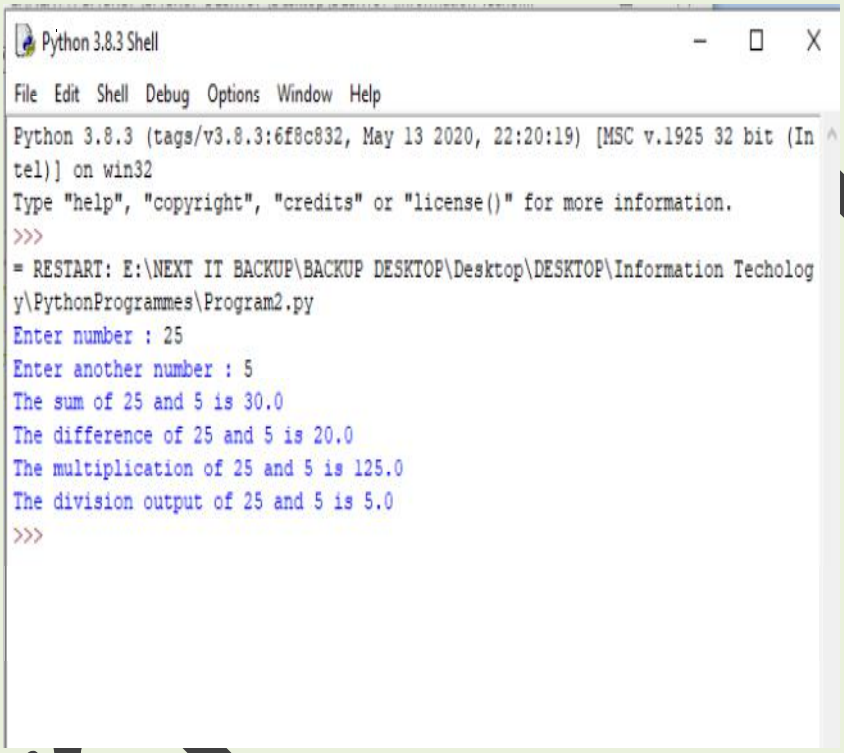
and	exec	not	assert	class
finally	or	break	for	from
pass	print	continue	global	raise
def	if	return	del	import
try	elif	in	while	else
is	with	except	lambda	yield

PROGRAM 2:

Program to perform arithmetic operations – add, subtract, multiply and divide.

```
num1 = input ('Enter number : ')

num2 = input ('Enter another number : ')

sum = float (num1) + float(num2)

difference = float (num1) - float(num2)

multiply = float (num1) * float(num2)

divide = float (num1) / float(num2)

print('The sum of {0} and {1} is {2}'.format(num1, num2, sum))

print('The difference of {0} and {1} is {2}'.format(num1, num2, difference))

print('The multiplication of {0} and {1} is {2}'.format(num1, num2, multiply))

print('The division output of {0} and {1} is {2}'.format(num1, num2, divide))
```

PROGRAM OUTPUT

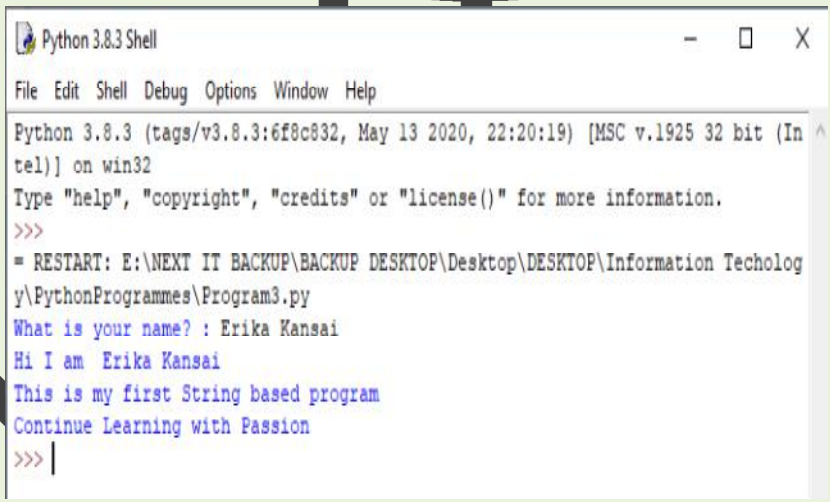


PROGRAM 2:

Program to input and print name.

```
NAME=str(input("What is your name? : "))
print("Hi I am ",NAME)
print("This is my first String based program")
print ("Continue Learning with Passion")
```

PROGRAM OUTPUT



PRACTICE ACTIVITY

Write a Python Program for the following:

1. To add and multiply five different numbers.
2. To divide 625 by 15, 460 by 12 and 33712 by 14
3. To create your profile summary.
4. To find the square root of the 3452.

REFERENCED SOURCE

- www.python.org,
- Python Tutorial,
- Introduction to Computer Programming Python-Ebook
- Python Concepts by Wikiversity