[](http://www.persistent.com/)



**SCRIPT 102 : Fundamentals of Python**

**1 April 2020**

**Post the session from my side do self-study form below learning course link:**

<https://knowledgecenter.persistent.co.in/ViewCourse/Python102>

* The access to the Selfy Shot course and the Objective test for this course will be available byon Knowledge Center : <https://knowledgecenter.persistent.co.in/ViewCourse/Python102>

**Copy Data folder from**

**CLG link -** <https://persistentuniversity.persistent.co.in/Repository/DocumentRepository.aspx?SkillId=10474>

You can also view my Python Video recording as a part Smart India Hackathon 2018 at -

<https://www.youtube.com/watch?v=zF-0vJeIxt8&feature=youtu.be>

**Notes:**

**Compiled**

**1.**

Source code--🡪 m/c obj---🡪 o/p

compiler

2. Performance: faster

3. Development : slower

**Interpreted**

1.Source code----------------🡪 o/p

interpreter **(line by line)**

2. Performance: slower

3. Development : faster

**Python Features:**

1.Remarkable power:

1)Procedural/structured way programming

2)OOP

2. Large library set support

3. Open source

**4. Python is strongly typed lang.**

5. Clean syntax

6. built in data structure : String, Tuple, List, Set, Dictionary

7. Portable

8. Relatively fast as compared to other Interpreted lang

9. No Type declaration

int num1 = 100

In Python:

**Num1 = 100**

**S1 = “ABC” ‘XYZ’ “””Persistent “””**

**Pi = 3.145**

**Python 2 / Python3**

**Execution of Python Script:**

**1)c:\python27\python**

**Python is installed at C:\Python27\python**

**this executable command python is an interpreter for you**

**C:\Python27\python command is accessible in other folders as well due to 'path' system**

**environment variable setting**

**to check this path env variable--->**

**1)on dos propmt type path to see the current path content**

**c:\path ----->**

**to add path execute the command**

**c:\set path=%path%;c:\python27**

**2) in computer settings :**

**Windows explorer --->this PC ---->rt click---->properties ---->Advanced system settings---->**

**Environment Variable button ---->path ---->edit this (add c:\python27)**

**Development environment:**

**1)Open DOS prompt**

**C:>python**

**>>>**

**2) Create a file : First.py**

**C:\demos\python First.py**

**Text Editor: Notepad/Notepad++**

**PyCharm/Eclipse/ Jupyter Notebooks : IDE**

**3)Use IDE: IDLE editor**

**Basic Python Lang Fundamentals:**

**Keywords : elif pass try except finally raise**

**Operators : in not in**

**Control structures:**

**If elif else**

**Errors In Python Script execution:**

1. **SyntaxError:**

**Example 1:**

**print "Hello World!!" #print is a keyword statement pre defined - Comment line**

**print "Welcome to Python Sessions!!!**

**2. IndentationError**

**if num1 == 100 :**

**print "In If block..."#IndentationError: expected an indented block**

**Run Time errors: pre defined Exception class in Python**

**1. NameError**

Example1:

print num1 #Run time error : NameError: name 'num1' is not defined

#program stopped after this

1. **TypeError:**

Example 1:

num1 =

s1 = "ABC"

num1 + s1 #int + str

#TypeError: unsupported operand type(s) for +: 'int' and 'str'

**3.ValueError**

Example 1:

s2 = "abc"

num = int(s2) #ValueError: invalid literal for int() with base 10: 'abc'

**4)IndexError**

s = '012345'

print "character at 8 index = ",s[8] #IndexError: string index out of range

#Tuple, List : Sequence indexes

**\*\*\*\*\*To Do List:**

1. **Read all below nuggets**
2. **Copy all given source codes at** [**CLG link**](https://persistentuniversity.persistent.co.in/CollaborativeLearningGroup/view.aspx?SkillId=10419) **and execute them once.**

Nugget 1 : **Overview of Basic Python**

Nugget 2 : **Functions**

Nugget 3 : **Modules and Packages**

Nugget 4 : **File Handling**

Nugget 5 : **Exceptions**

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1. Complete reading all these Nuggets from

The access to the Selfy Shot course and the Objective test for this course will be available by **26th Mar’2020**  on Knowledge Center : <https://knowledgecenter.persistent.co.in/ViewCourse/Python102>

2. Please execute all codes in these Nuggets

3. Start solving assignment at the end of Nuggets

**\*\*\*\*Eclipse Settings**

1. **To add python development plugin**

**windows🡪preferences**

**or help->install new software**

**click on ADD**

**window : Name : enter as Python 2**

**search pydev download in google**

**put this location** [**http://pydev.org/updates**](http://pydev.org/updates)

[http://update-production-pydev.s3.amazonaws.com/pydev/updates](http://update-production-pydev.s3.amazonaws.com/pydev/updates/site.xml)

**More Info at:** **http://www.pydev.org/download.html**

**2)**

**then preferences , windows option-preferences**

**interpreter**

**selete c:\python\python.exe**

**\*\*\*\*Anaconda software:**

Jupyter Notebook provided in allocated VM: Please execute it.

Software installation from:

<https://www.anaconda.com/download/>

**\*\*\*\*If in case of any query related to Python learning, please raise that in “Discussion Forum” tab at CLG link -** <https://persistentuniversity.persistent.co.in/Repository/DocumentRepository.aspx?SkillId=10474>