

## Installation of Python Software:

- Download the required python latest software version from the following website  
**<https://www.python.org/downloads/>**
- Select **windows** option and click **download button**
- **Double click** on the downloaded Installer file and install it by following steps.
- Latest Python 3 release is : **3.X.Y** version

## Adding Python PATH Environment Variables:

After downloading and installing Python Software, by default it is installing in C-Drive likebelow,

**PATH : C:\Users\Lenovo\AppData\Local\Programs\Python\Python311**

- It is required for **adding** Python **Interpreter** to the Environment variable section.

**PATH : C:\Users\Lenovo\AppData\Local\Programs\Python\Python311\Scripts**

- It is required for **adding** Python **PIP** command to the Environment variable section.
- Using PIP we can install Third party Python Packages/Modules.  
**C:\Users\Lenovo> pip install required\_module\_Name**

## Development of Python application or Programs

- We can develop python applications or programs in 2 modes. They are,
  1. Interactive mode
  2. Batch Mode

### 1. Interactive mode

- Interactive mode is a command line shell.
- In command line shell if we write any Python statement immediately that statement will execute and gives the result.

- Interactive mode is used to test the features of the Python ( What Python can do ?)
- Open command prompt and enter **python.C:\Users\Lenovo> python**
- Now we are going to get python prompt area like below  
`>>>`
- Now we can test python coding basics like below  
`>>> a = 10`  
`>>>`  
`print`  
`nt`  
`(`  
`a)`  
`10`  
`>>> type(a)`  
`<class 'int'>`  
`>>>`  
`print("He`  
`llo")Hello`
- **NOTE:** Interactive mode is not used for development of the business applications.
- To overcome this problem then we can use Batch Mode.

## 2 . Batch mode

- In Batch mode we write group of python statements in any one of the Editors or IDE's.

### **Different Editors are :**

1. Notepad
2. Notepad++
3. EditPlus
4. nano
5. IDLE

**Different IDE's are :**

1. Pycharm
2. Visual Studio.
3. Sublimetext
4. Atom
5. Eclipse
6. NetBeans



- After writing the group of Python statements in anyone of the Editor or IDE , we save the Python file with extension **.py**  
For example : FileName.py
- After developing the .py files , we submit those files to the python **Interpreter** directly.
- Batch mode is used for development of business applications.

For Example :

**Step1:** Open the Notepad editor

**Step2:** Write the following code

```
i = 10  
j = 20  
print( i + j )
```

**Step3:** Save the above file with Basic.py in any one location.

**Step4:** Open the command prompt upto python file storing location (Basic.py) and execute python file.

D:\Python\_Programs> **python Basic.py**----- >> click enter

**Output :**

```
300  
100
```

**Note :** **IDLE** --->> [Integrated Development Language Environment](#)

- When ever we install python software in windows os along with the python software IDLE or python GUI editor will be installed.
- In IDLE editor we can develop the Python programs in interactive and batch mode.
- After developing the python application in IDLE editor directly we can run that python by using shortcut key(F5).
- Within the IDLE editor we can perform the debugging operation of the python applications.

**How to Create a python program using IDLE tool ?**

Open **IDLE** tool --->> Click on **File** menu --->> Click on **New File Ctrl + N** ---->> Then it will open a python Notepad prompt --->> Now create a python program.



Then Click on **File** menu----- >> Click on **Save Ctrl + S**

---->> Then it will open Python software location prompt--- >> Choose your required folder

wherever you want to save ---->> Give file any file name and save with .py extension like **Sample.py**

### **How to Execute a python program using IDLE tool ?**

Click on **Run** menu --->> Click on **Run Module F5**----- >> Now output will show on IDLE shell.