MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY

Santosh, Tangail -1902

Lab Report No   :   04

Lab Report Name   **:** Introduction to Python

Course Name   :   Computer Networks Lab

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Introduction to Python

Objective :

- Setup python environment for programing.
- Learn the basics of python.
- Create and run basic examples using python.

Theory :

Definition of Python: Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.

Main Features of Python:

- Easy to code
- Free and Open Source
- Object-Oriented Language ● GUI Programming Support
- High-Level Language
- Extensible feature
- Python is Portable language
- Python is Integrated language
- Interpreted Language
- Large Standard Library
- Dynamically Typed Language

Setup of Python Environment :

Step 1: Open Eclipse and setup a correct access to Internet.

Step 2: Installing python environment using Eclipse Graphical Interface. To install PyDev, we need to use **Help > Eclipse Marketplace** and installed PyDev – Python IDE for Eclipse 7.6.0.
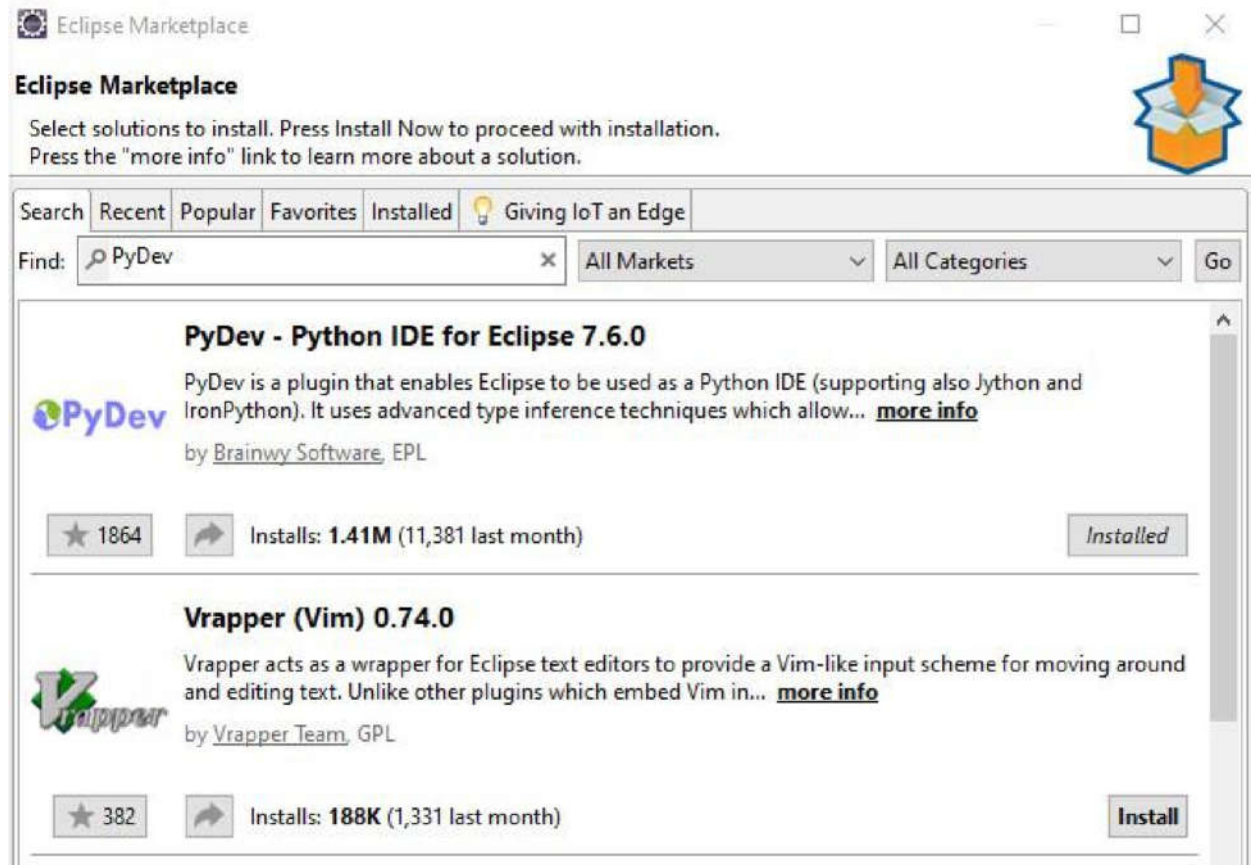

Step 3 : After installing PyDev, have to go **File > New > Other > PyDev > PyDev Project.**

New

Select a wizard

Wizards:

```
> 📁 JAXB
> 📁 JPA
> 📁 Maven
> 📁 Oomph
> 📁 Plug-in Development
∨ 📁 PyDev
    🏗 Link to Existing Source
    dj PyDev Django Project
    🐍 PyDev Google App Engine Project
    P PyDev Module
    ⊞ PyDev Package
    🐍 PyDev Project
```

| ? | | < Back | Next > | Finish | Cancel |

Step 4 : To

configure an interpreter , have to go "click here to configure an interpreter not listed" and select "Config first in PATH".
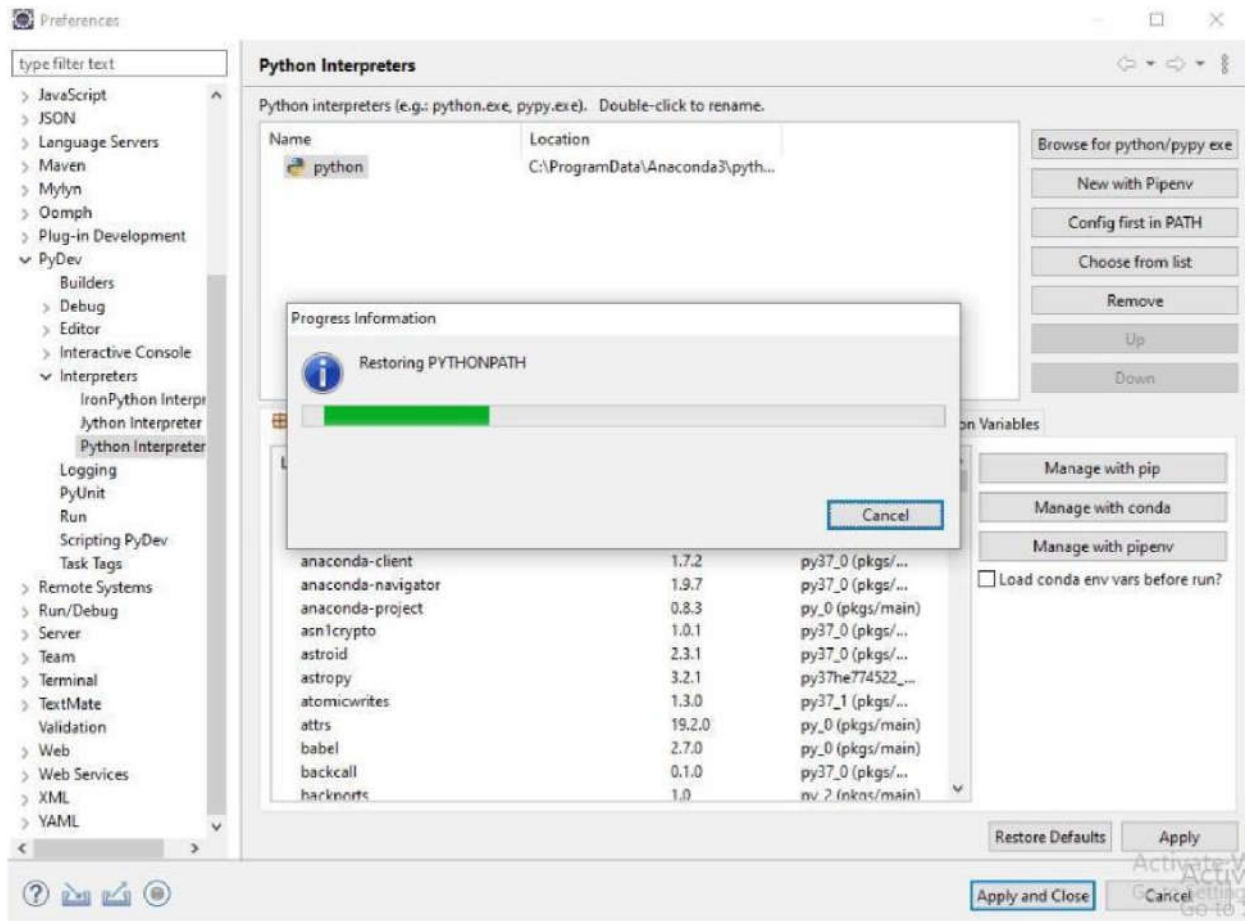
Step 5 : Then, give a project name and click "Finish" button.

Exercise 4.1.2: Write a Hello World program

```
P Python1 ⊠
  1  print("hello world")

    <
```

Console ⊠
```
<terminated> Python1.py [C:\ProgramData\Anaconda3\python.exe]
hello world
```

Exercise 4.1.3: Compute 1+1

```
P Python1 ⊠
  1  a = 1
  2  b = 1
  3
  4  print(f"{a} + {b} = ",a+b)
  5  |

    <
```

Console ⊠
```
<terminated> Python1.py [C:\ProgramData\Anaconda3\python.exe]
1 + 1 =  2
```

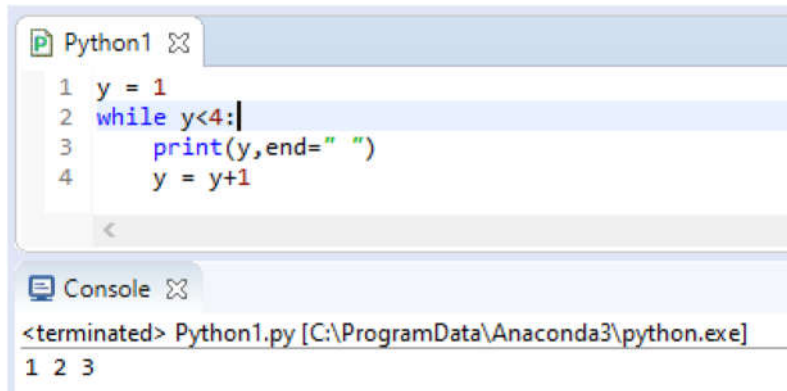**Exercise 4.2.2:** The if statement:

```
P Python1 ⊠
  1  a = 4
  2  b = 3
  3
  4  if a > b :
  5      print("a is greater than b")
  6  else:
  7      print("b is greater than a")

    <
```

Console ⊠
```
<terminated> Python1.py [C:\ProgramData\Anaconda3\python.exe]
a is greater than b
```
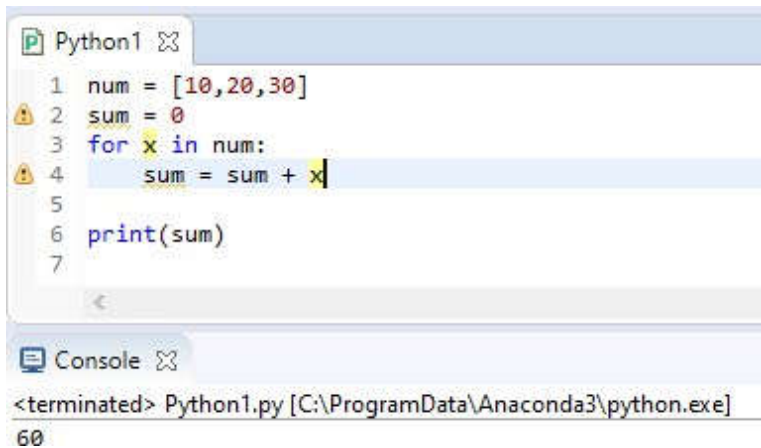
Exercise 4.2.3: The while Statement

```
P Python1 ⊠
1  y = 1
2  while y<4:
3      print(y,end=" ")
4      y = y+1

Console ⊠
<terminated> Python1.py [C:\ProgramData\Anaconda3\python.exe]
1 2 3
```

Exercise 4.2.4: The for Statement

```
P Python1 ⊠
1  num = [10,20,30]
2  sum = 0
3  for x in num:
4      sum = sum + x
5
6  print(sum)
7

Console ⊠
<terminated> Python1.py [C:\ProgramData\Anaconda3\python.exe]
60
```

Conclusion: This lab we introduced to python.Python is a widely used general-purpose, high level programming language.It was created by Guido van Rossum in 1991 and further developed by the Python Software

Foundation.It was designed with an emphasis on code readability, and its syntax allows programmers to impress their concepts in fewer lines of codes.