MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY

DEPARTMENT OF ICT
Lab Report No : 05

Course Code   : ICT-3208

Course Title   : Network Planning and Designing Lab

Lab Report Name : Introduction to Python Lab

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Introduction to Python

Objectives:

- Setup python environment for programming
- Learn the basics of Python
- Create and run basic examples using Python

1.What is Python ? What is the main features of Python?

Python: Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object- oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

Main features of Python: The main features of Python are:

i.   Simple: Python is a simple and minimalistic language. This pseudocode nature of Python is one of its greatest strengths.

ii. Easy to Learn: Python is extremely easy to get started with. Python has an extraordinarily simple syntax.

iii. Free and Open Source: Python is an example of FLOSS (Free/Libré and Open Source Software). In simple terms, you can freely distribute copies of this software, read it's source code, make changes to it, use pieces of it in new free programs, and that you know you can do these things. FLOSS is based on the concept of a community which shares knowledge.

iv. High-level Language: When you write programs in Python, you never need to bother about the low-level details such as managing the memory used by your program, etc.

v.   Portable: Due to its open-source nature, Python has been ported (i.e. changed to make it work on) to many platforms. All your Python programs can work on any of these platforms without requiring any changes at all if you are careful enough to avoid any systemdependent features.

vi.   Object Oriented: Python supports procedure-oriented programming as well as object oriented programming. In procedure-oriented
languages, the program is built around procedures or functions which are nothing but reusable pieces of programs. In object- oriented languages, the program is built around objects which combine data and functionality.

2.How to setup python environment in your computer ?

Ans : Setup of Python Environment :

Step-1 : Open Eclipse and setup a correct access to Internet (This is required only in RMIT network). In order to set up follow the instructions (figure 1):
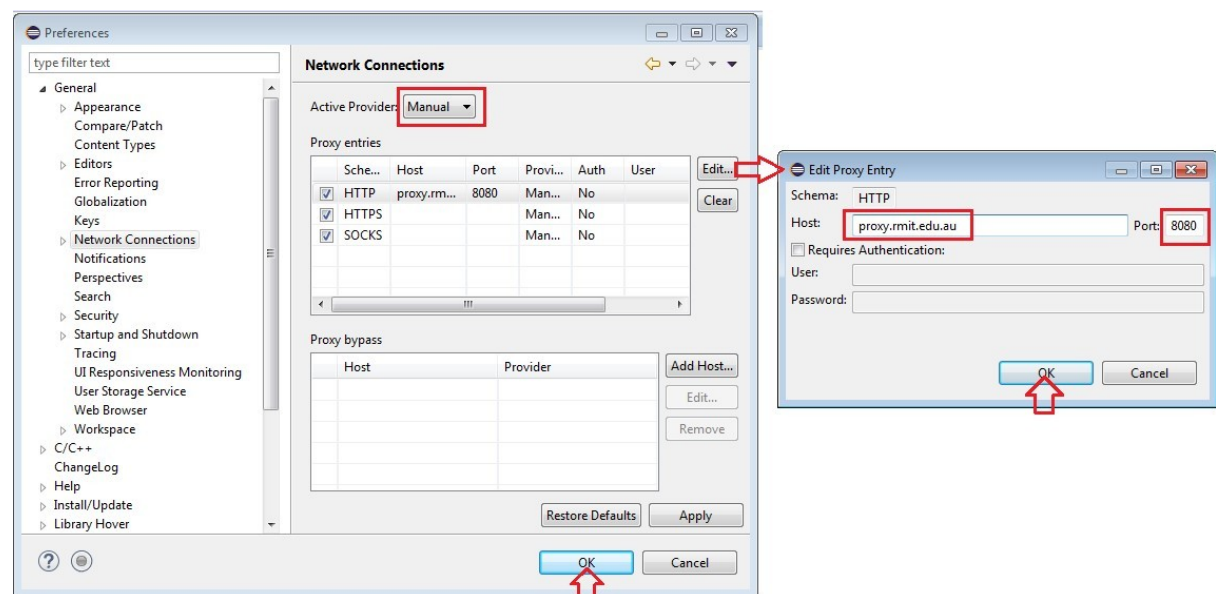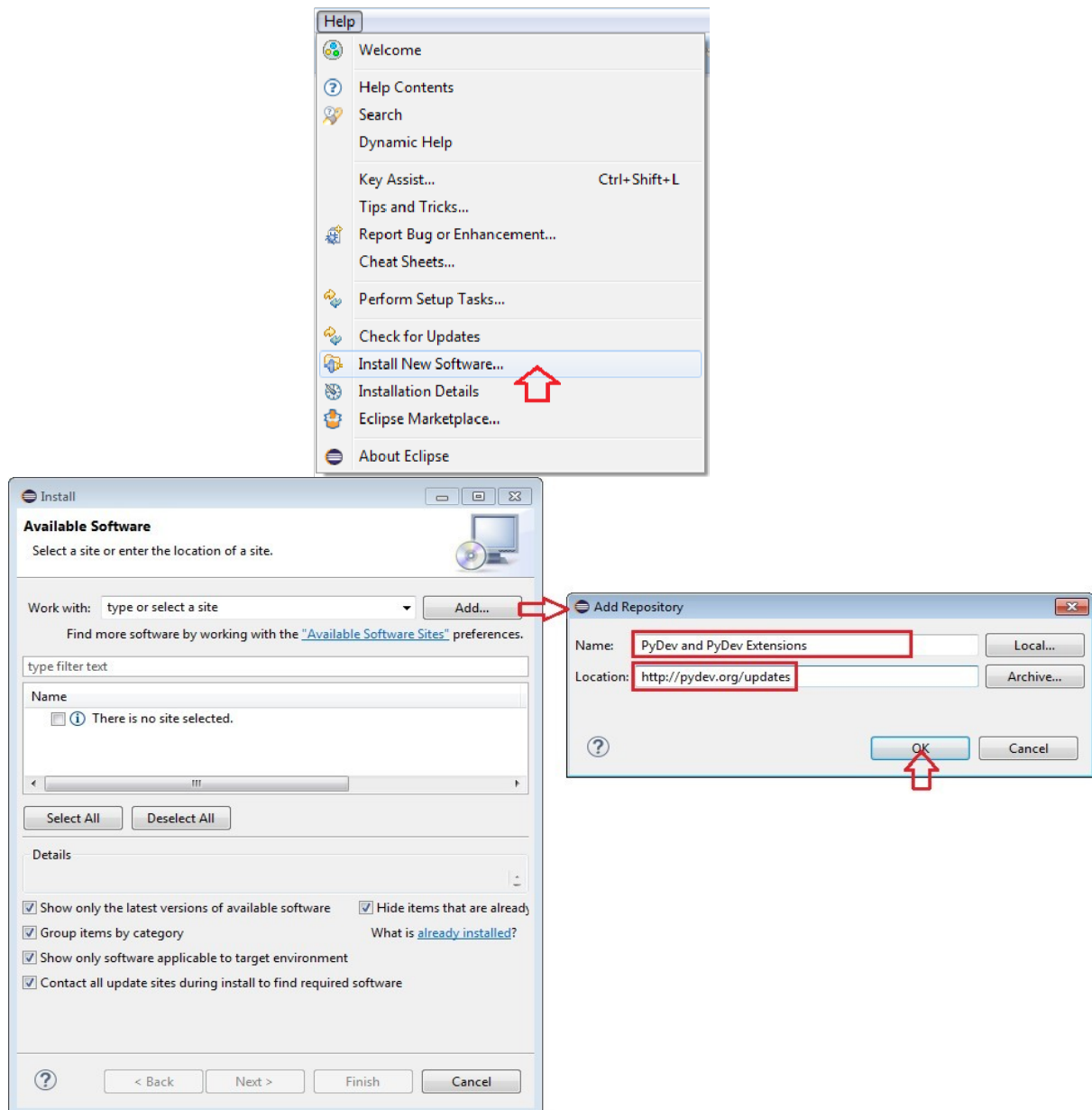

Fig-1: Eclipse setup for internet

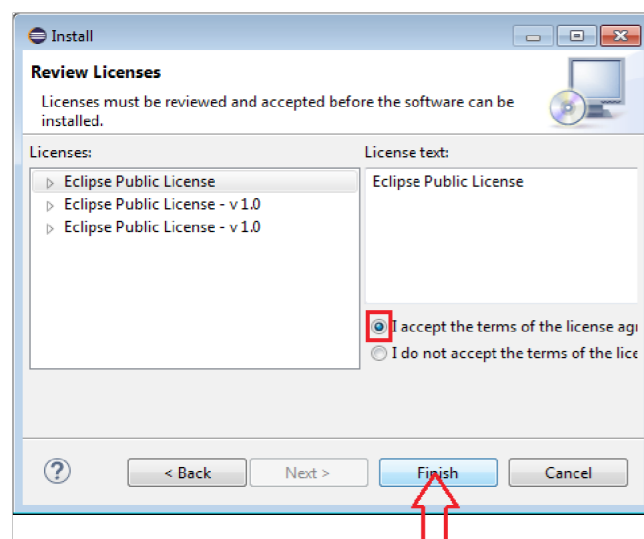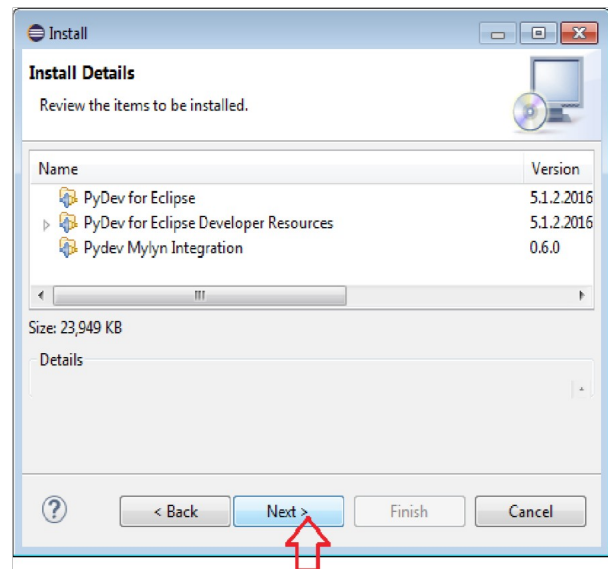# Step-2 : Installing python environment using Eclipse Graphical Interf
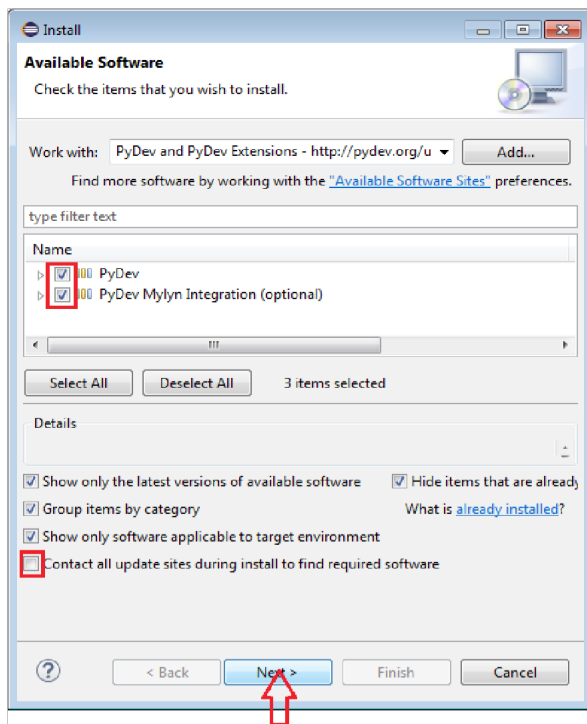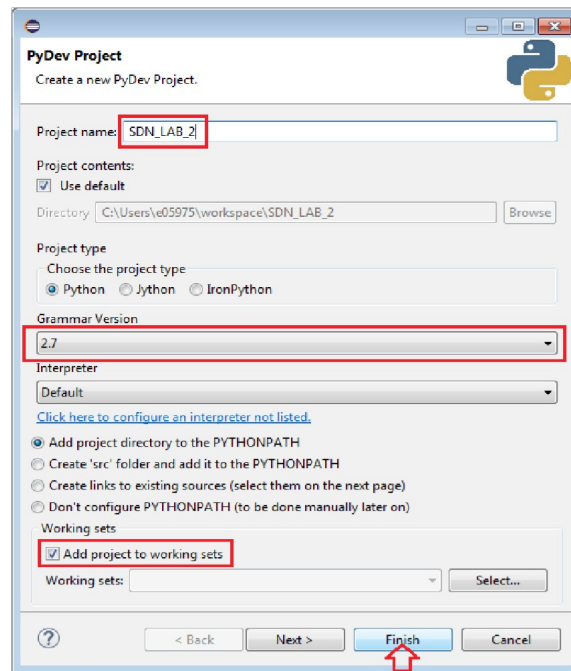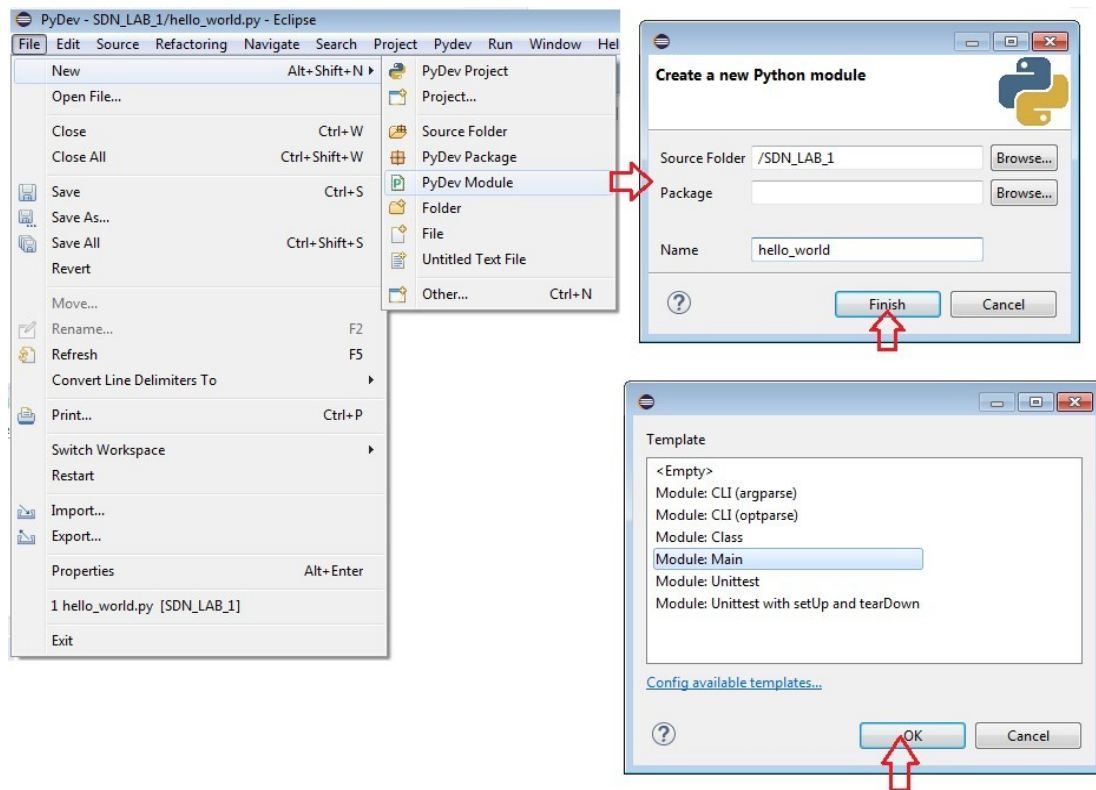
Fig-2:Setup Python on Eclipse

3.How to create a Python project in Eclipse?

Ans: Create a python project, click in **File > New > PyDev Project**.

Now Create a python script, click in **File > New > PyDev Module**

4. Compute 1+1 ?

Source code:

```python
print(1+1)
```

Output:


```
2

Process finished with exit code 0
```

5. Verify the use of the following operator?

Source code:

```python
print(30>10)
print(30<10)
print(30>=10)
print(30<=10)
```

```
print(30==10) print(30!
=10) print("Samim" ==
"Samim")
```
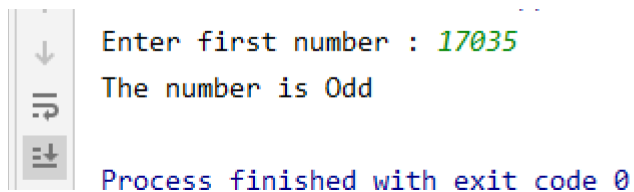
Output :

```
True
False
True
False
False
True
True
```

6. The if statement:

Create a program for taking a number from the user and check if it is even or odd? Source code:

```
num = int(input("Enter first number :
")) if num%2==0:        print("The number
is Even") else:
    print("The number is Odd")
```
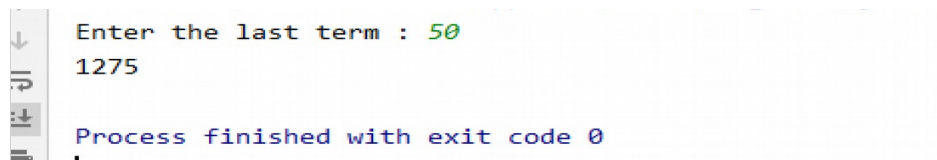
Output:

```
Enter first number : 17035
The number is Odd

Process finished with exit code 0
```

7. The while Statement:

Write a program that take input from user and prints the sum of the inputted last term? <u>Source Code:</u>

```
n= int(input("Enter the last term :
"))   sum=0 i=1 while i<=n:
sum=sum+i      i=i+1 print(sum)
```

<u>Output:</u>

```
Enter the last term : 50
1275

Process finished with exit code 0
```
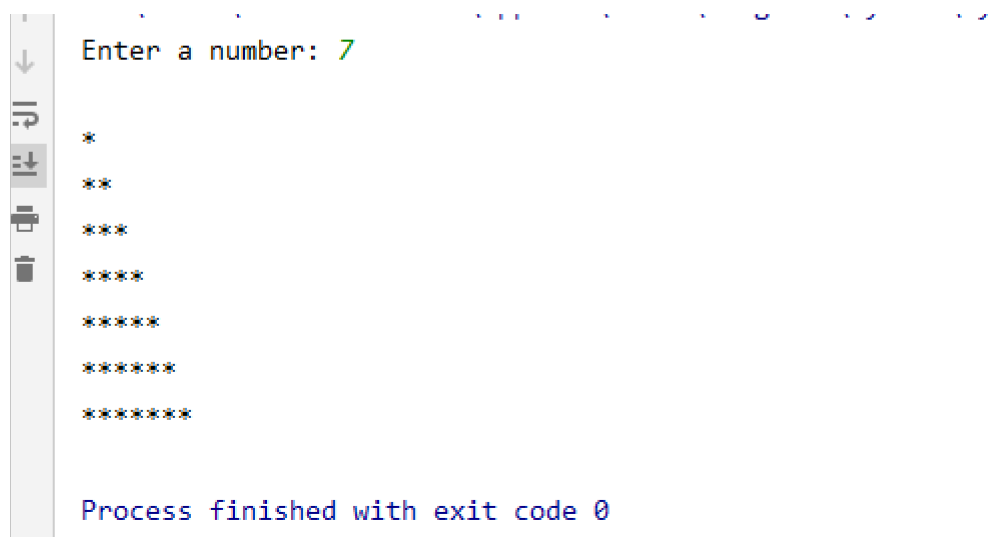
8. The for Statement:

Create a program for printing pyramid using star?

<u>Source code:</u>

```
n=int(input("Enter  a  number:
"))   for  i  in   range(n+1):
print(i * "*")
```

Output:

```
Enter a number: 7

*

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Process finished with exit code 0
```

Conclusion:

From this lab, I learn how to setup python environment in a pc. I also learn the basics of python and run basic examples of python. I am thankful to my teacher for giving such lab report to do.