



**Mawlana Bhashani Science And Technology University**

## **Lab-Report**

Lab Report No: 04

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### **Submitted To**

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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.

## 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 Manual Proxy follow the instructions (see also figure 1): a. Go to **Windows > Preferences > General > Network Connections**.

b. Change Active Provider to Manual.

c. Input proxy details, including username/password if required.

?

**Host:** proxy.rmit.edu.au

?

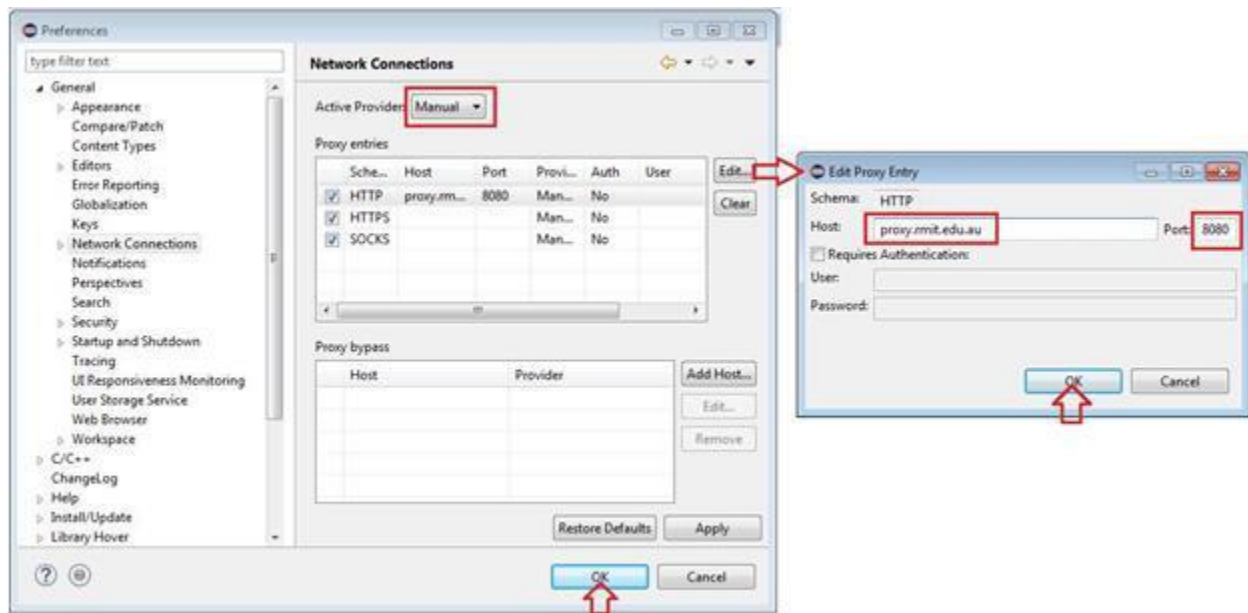
**Port:** 8080

?

**Username/password:** No required

d. Clear SOCKS proxy.

e. Restart Eclipse



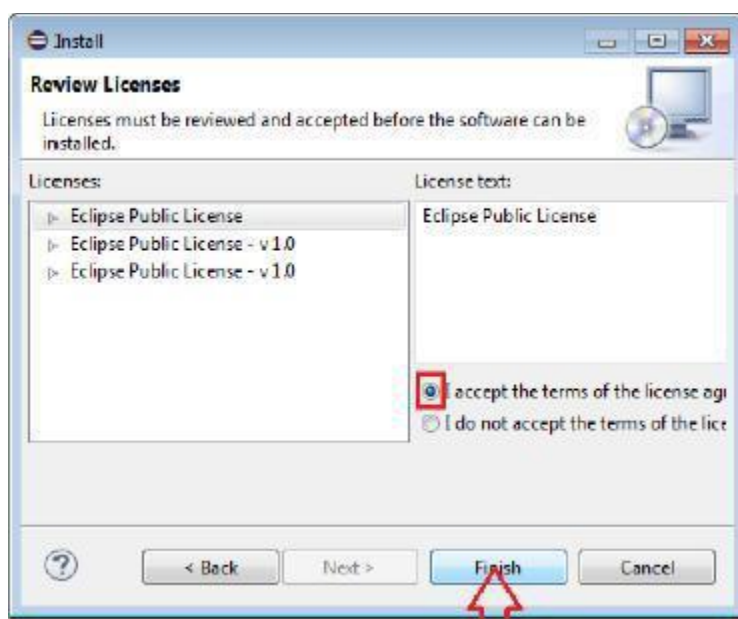
## STEP 2: Installing python environment using Eclipse Graphical Interface1.

- a. To install PyDev and PyDev Extensions using the Eclipse Update Manager, you need to use the **Help > Install New Software...** menu (note that in older versions, this would be the 'Find and Install' menu) as shown in the following figure:

In the next screen, add the update site(s) you want to work with (see the figure below). The available update sites are :

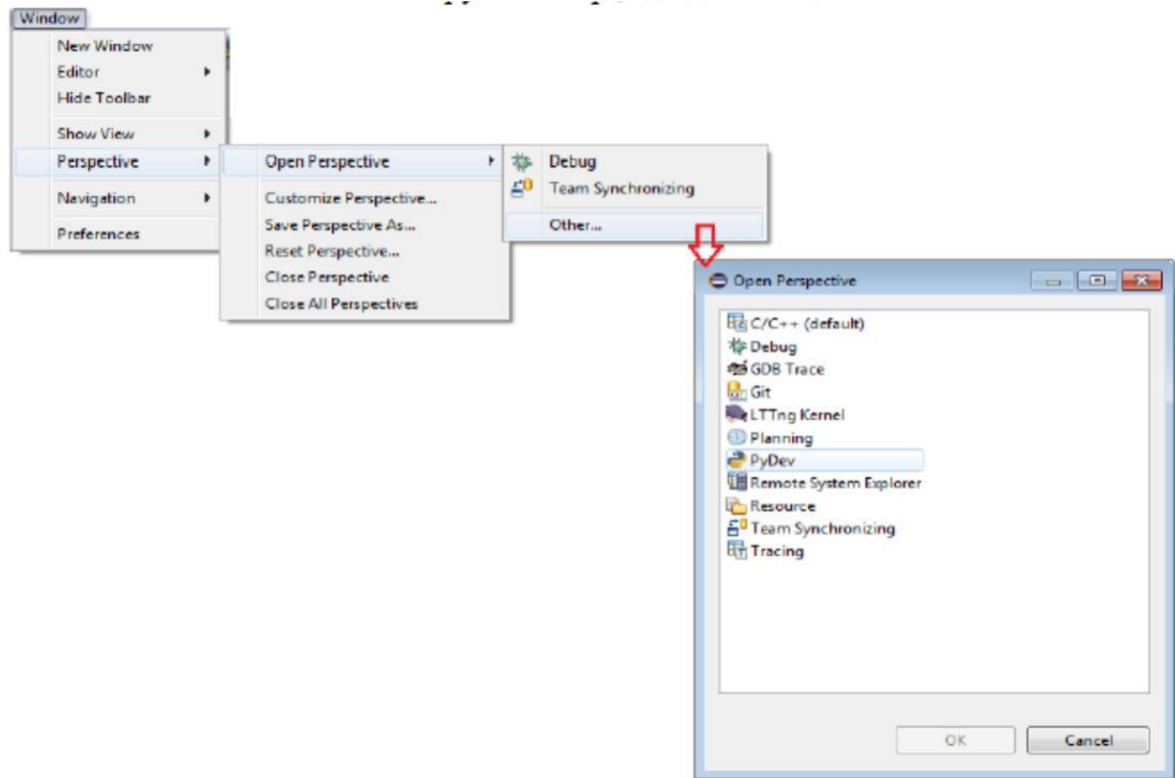
<http://pydev.org/updates>

And finally, read the license agreement and if you accept, select the accept radio button and click 'Finish'



STEP 2: Checking the installation: You can verify if it is correctly installed going to the menu 'window> preferences' and checking if there is a PyDev item under that (see Figure 7). After that eclipse will display the graphical interface for python perspective, the main components are (see Figure 8)

- ❓ Project Editor is the section where python scripts can be edited,
- ❓ Console allows the visualization of results father running a python script,

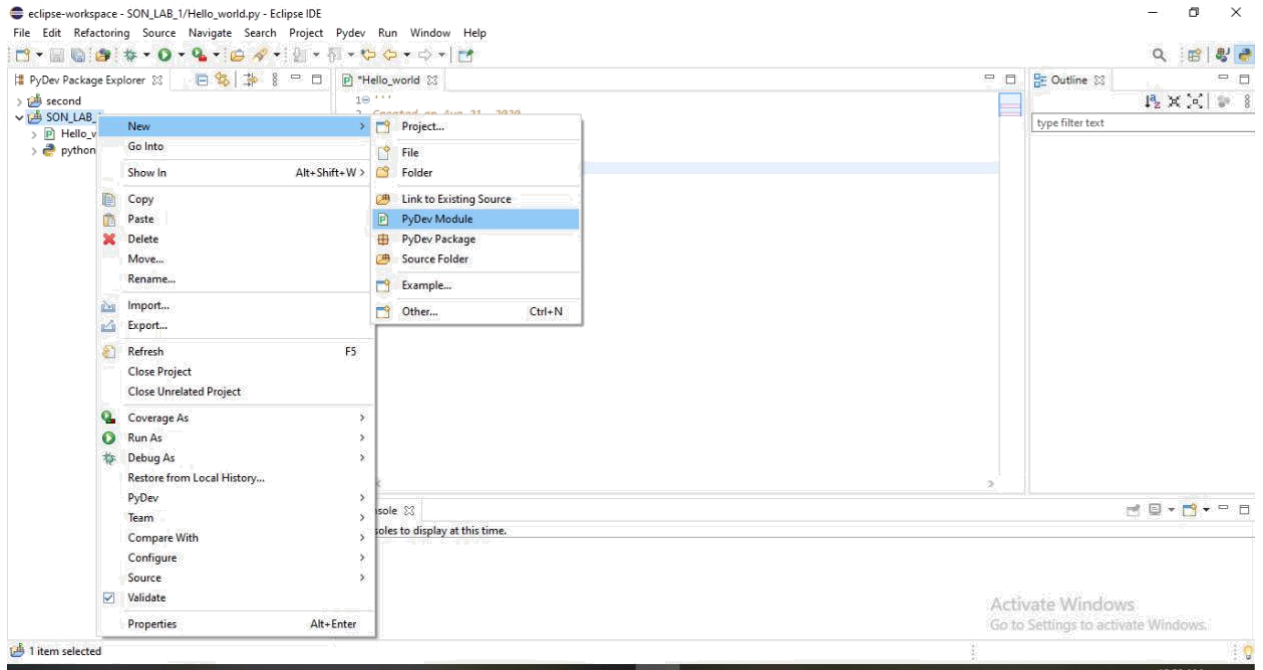


## Exercises

### Section 4.1: Basics of python and programming

### Exercise 4.1.1: Create a python project.

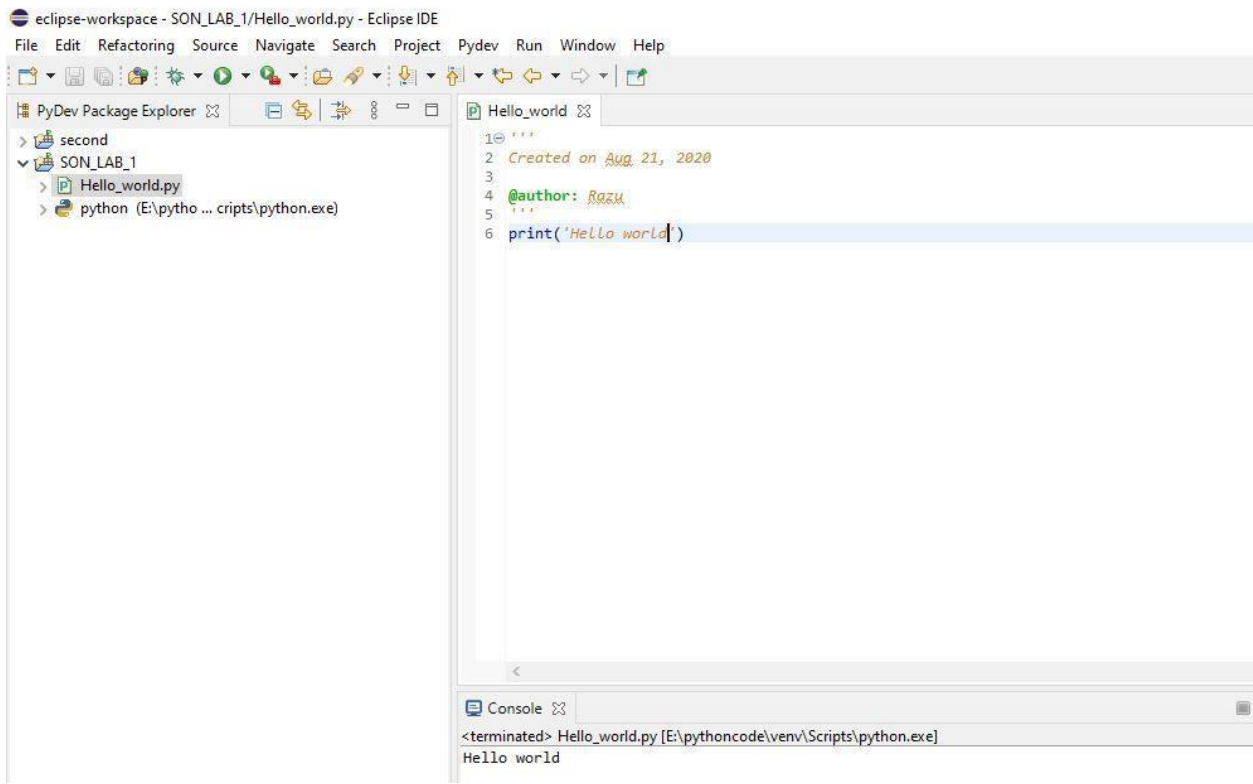
Answer:



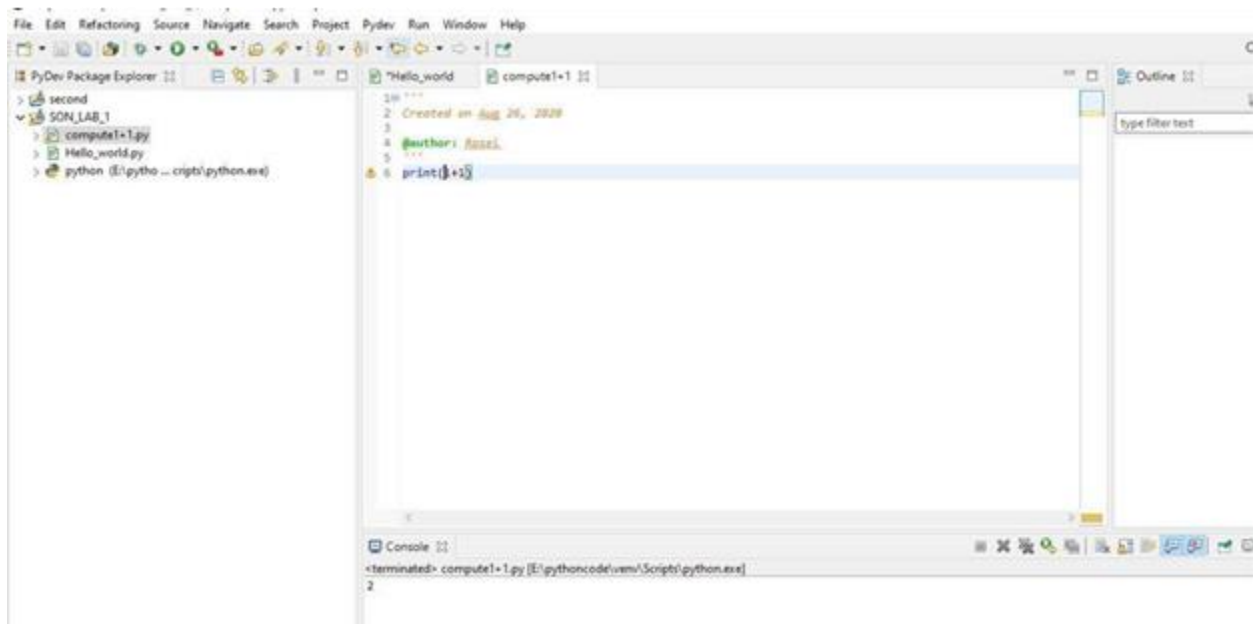
Project created successfully.

### Exercise 4

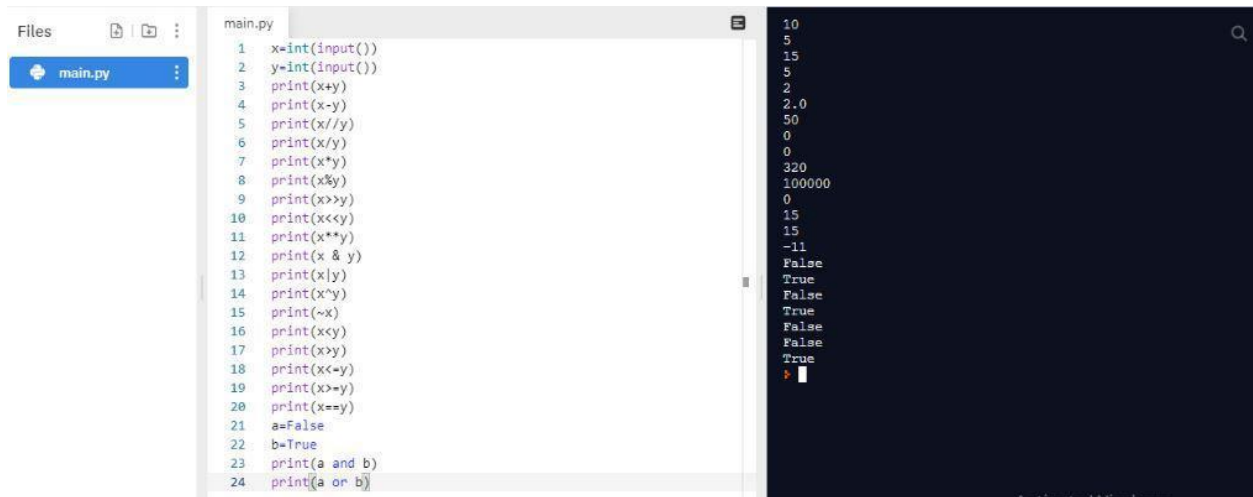
#### 1. PrintHelloWorld



## 2. Compute 1+1



### 3.Expression



```
main.py
1 x=int(input())
2 y=int(input())
3 print(x+y)
4 print(x-y)
5 print(x//y)
6 print(x/y)
7 print(x*y)
8 print(x%y)
9 print(x>>y)
10 print(x<<y)
11 print(x**y)
12 print(x & y)
13 print(x|y)
14 print(x^y)
15 print(~x)
16 print(x<y)
17 print(x>y)
18 print(x<=y)
19 print(x>=y)
20 print(x==y)
21 a=False
22 b=True
23 print(a and b)
24 print(a or b)
```

```
10
5
15
5
2
2.0
50
0
0
320
100000
0
15
15
-11
False
True
False
True
False
False
True
True
>
```

### 4.for loop



```
main.py
1 n=5
2 for i in range(5):
3     print(i*i)
```

```
0
1
4
9
16
>
```

### 5.While loop program



```
main.py
1 i=10
2 while i>5:
3     print(i**i)
4     i=i-1
```

```
10000000000
387420489
16777216
823543
46656
>
```