Lab Report No: 04

Lab Report Name: Introduction to Python.

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Theory:

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.**

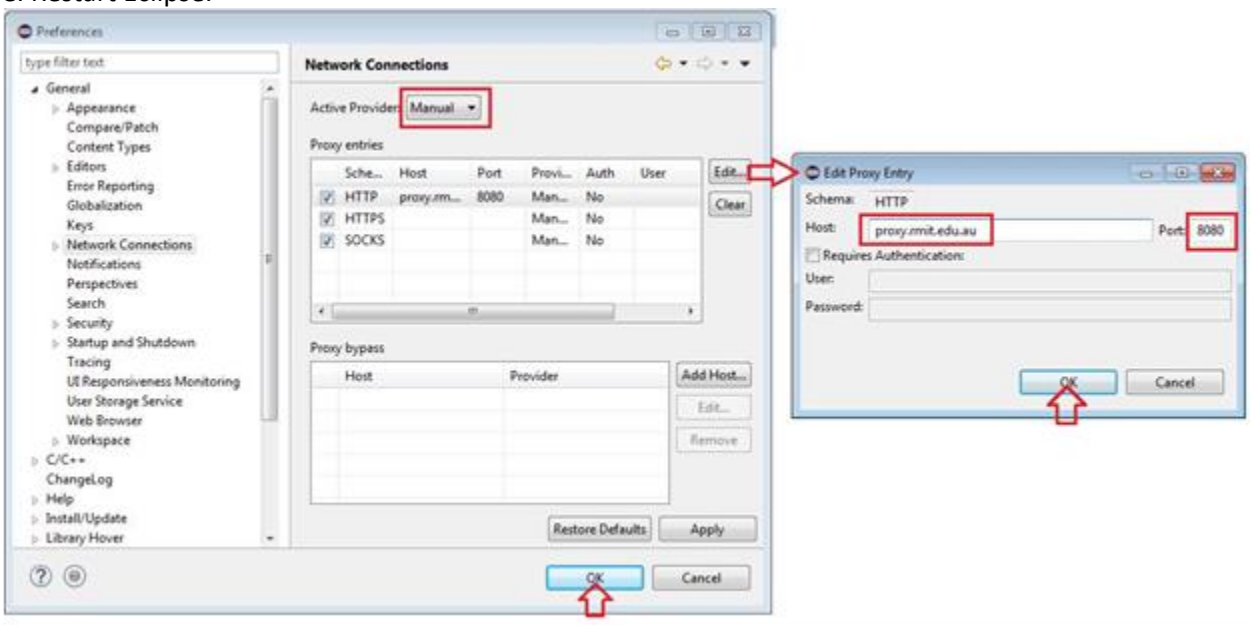
b. Change Active Provider to Manual.

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

- **Host:** proxy.rmit.edu.au
- **Port:** 8080
- **Username/password**: No required

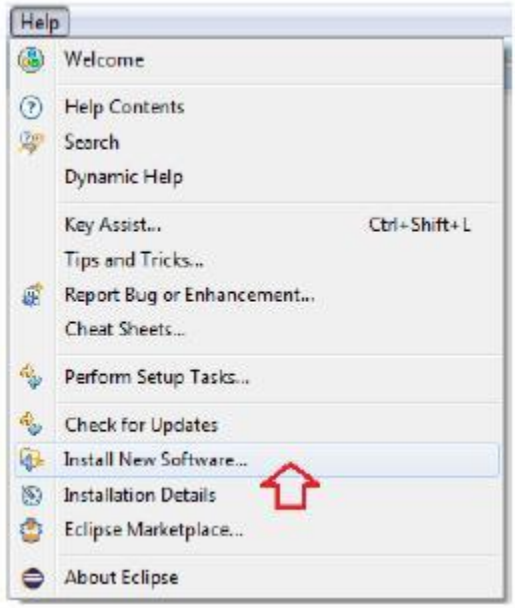
d. Clear SOCKS proxy.

e. Restart Eclipse.



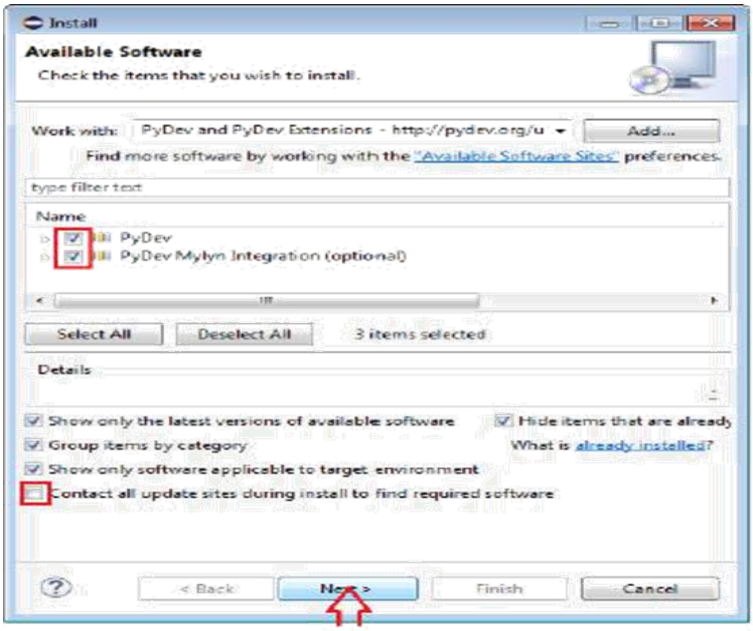
STEP 2: Installing python environment using Eclipse Graphical Interface1.

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:

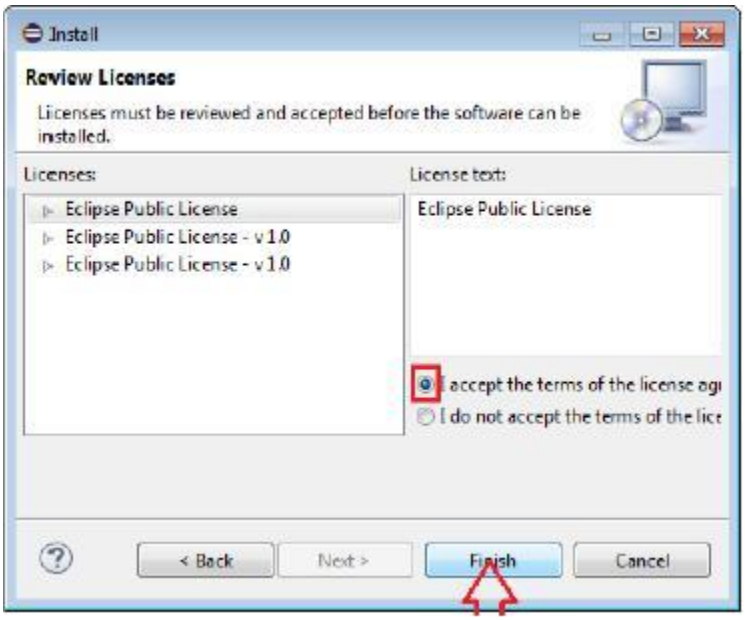


In the next screen, add the update site(s) you want to work with (see the figure below). The available update sites are :

http://pydev.org/updates

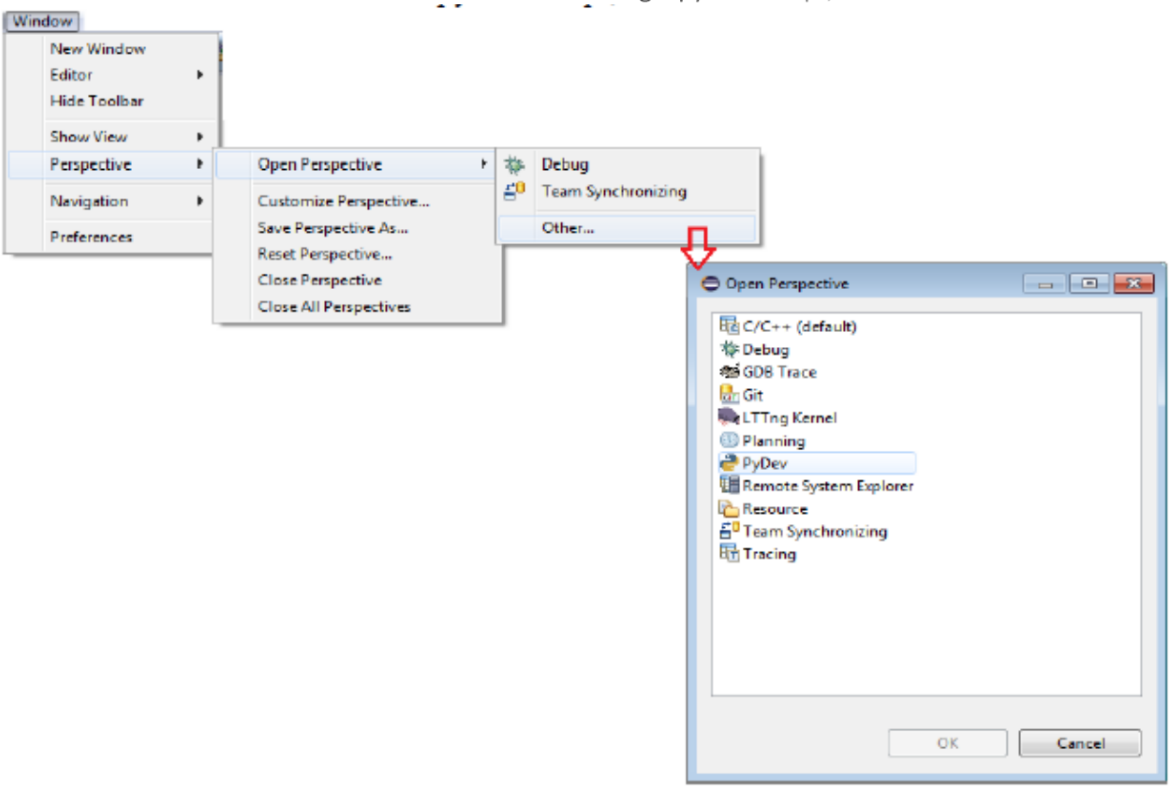


And finally, read the license agreement and if you accept, select the accept radio button and click 'Finish'



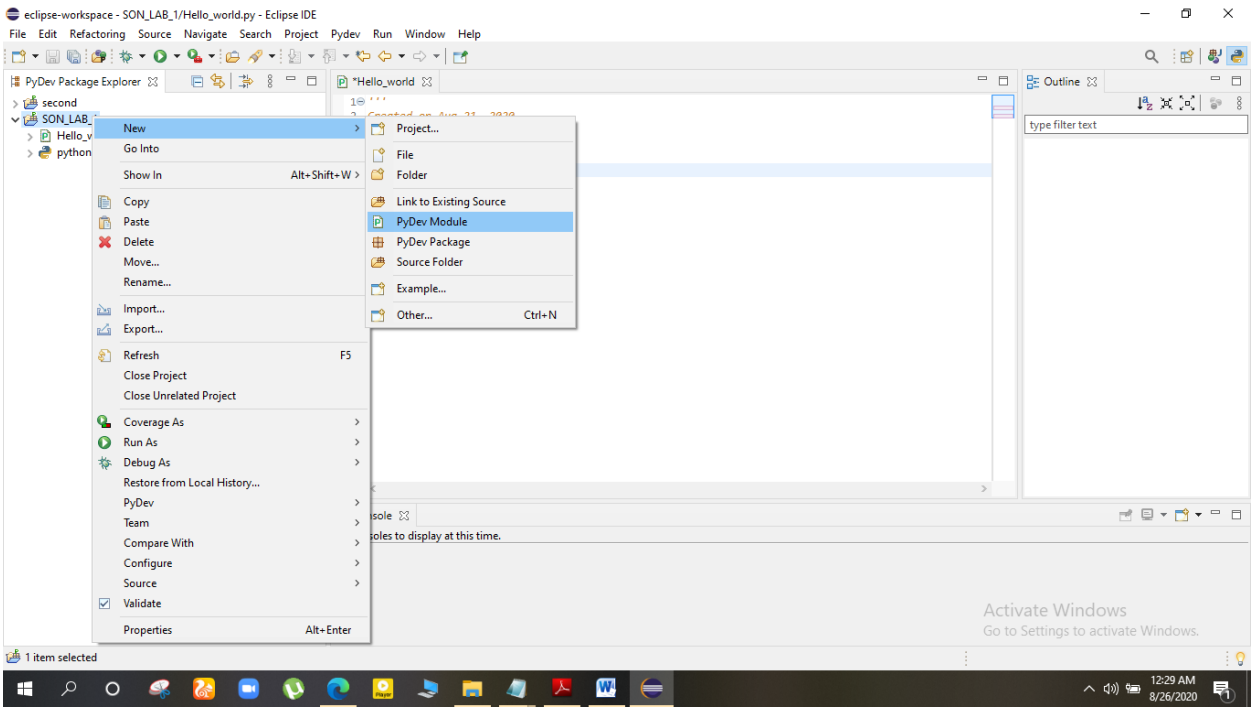
STEP 2: Checking the installation: You can verify if it is correctly installed going to the menu 'window> preferences' and checking if there is a PyDev item under that (see Figure 7). After that eclipse will display the graphical interface for python perspective, the main components are (see Figure 8)

- 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 programing
Exercise 4.1.1: Create a python project.

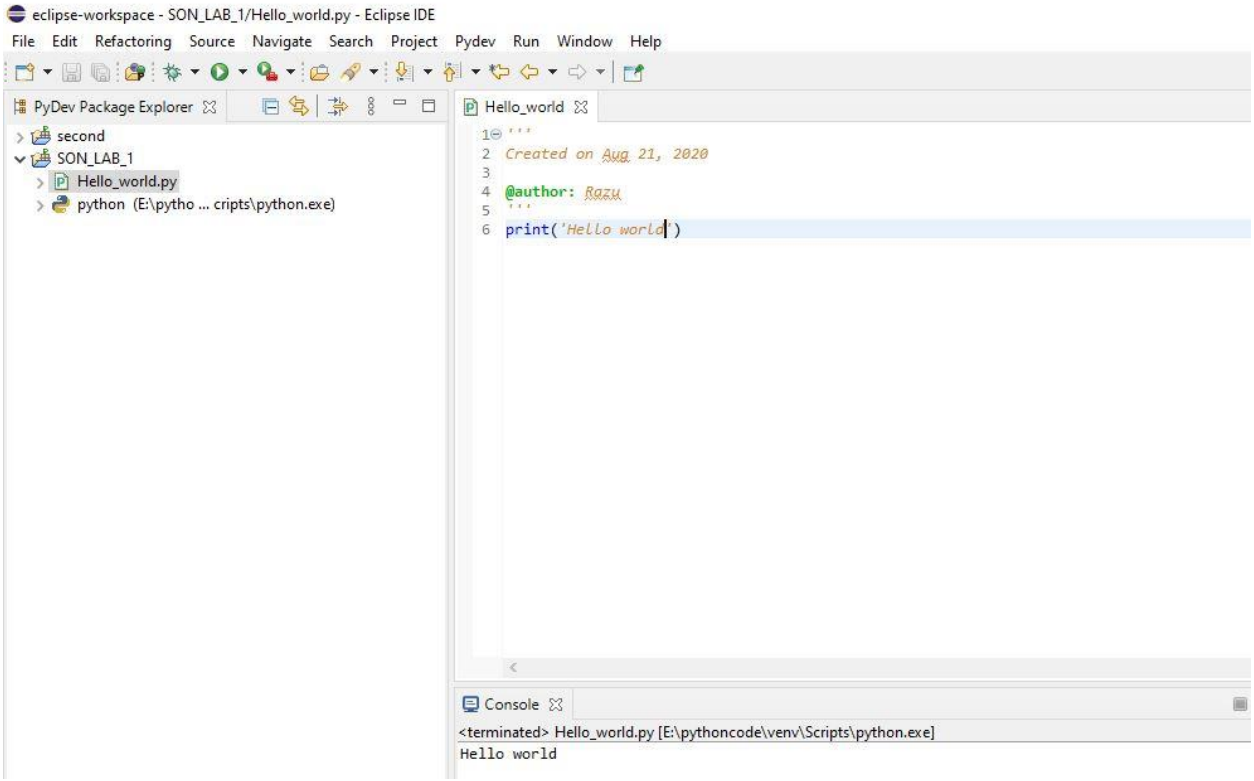
Answer:



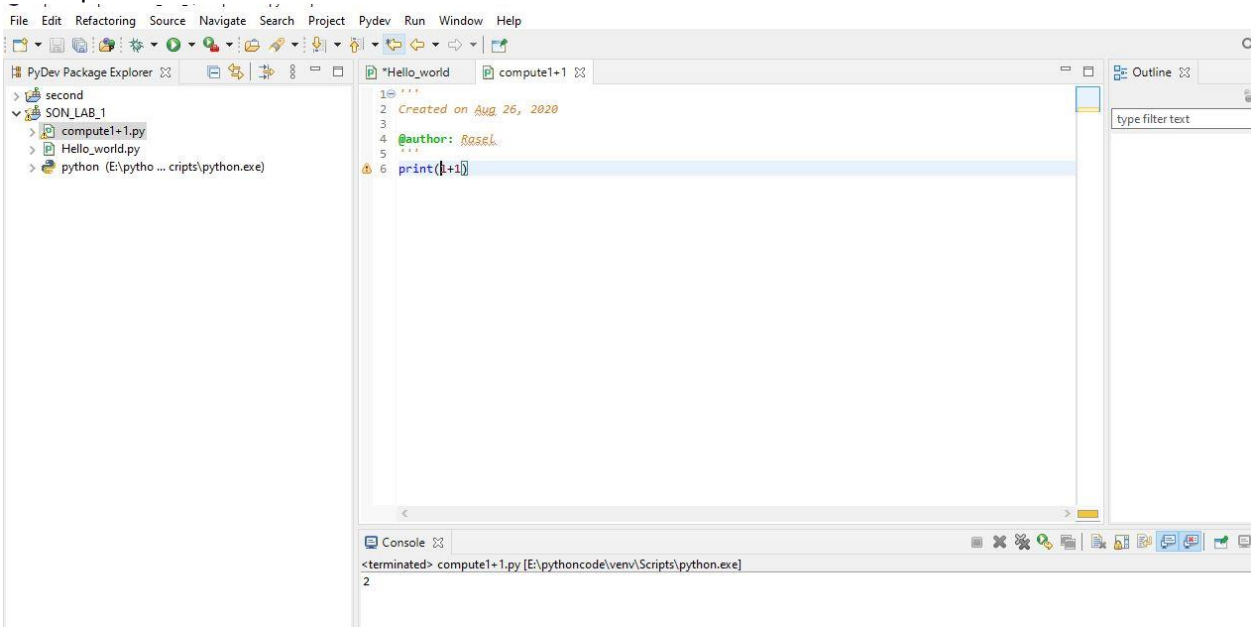
Project created successfully.

Exercise 4

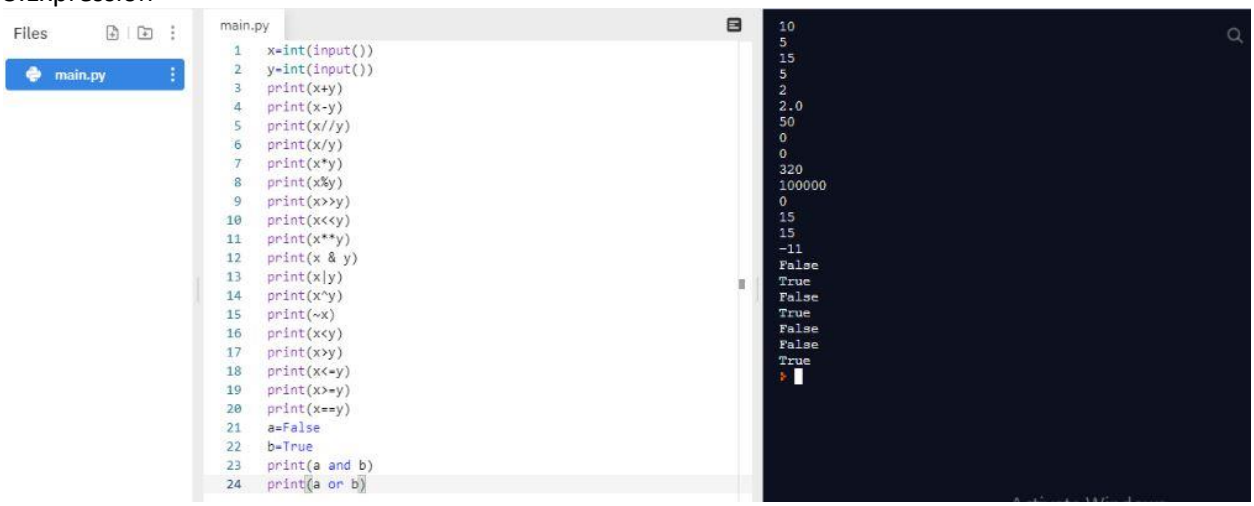
1.Print Hello world



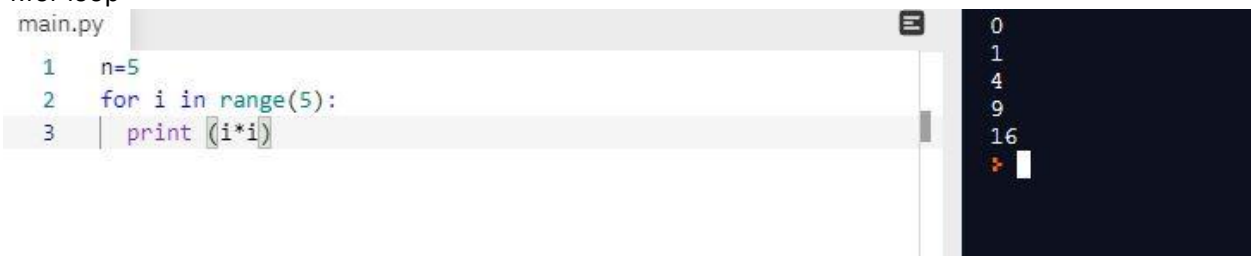
2.Compute 1+1



3.Expression



4.for loop



5.While loop program