Lab Report No -01

Name: Tahrima Akter

IT-18058

THEORY:

Python is an interpreted, high-level and general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant whitespace. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Set up 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

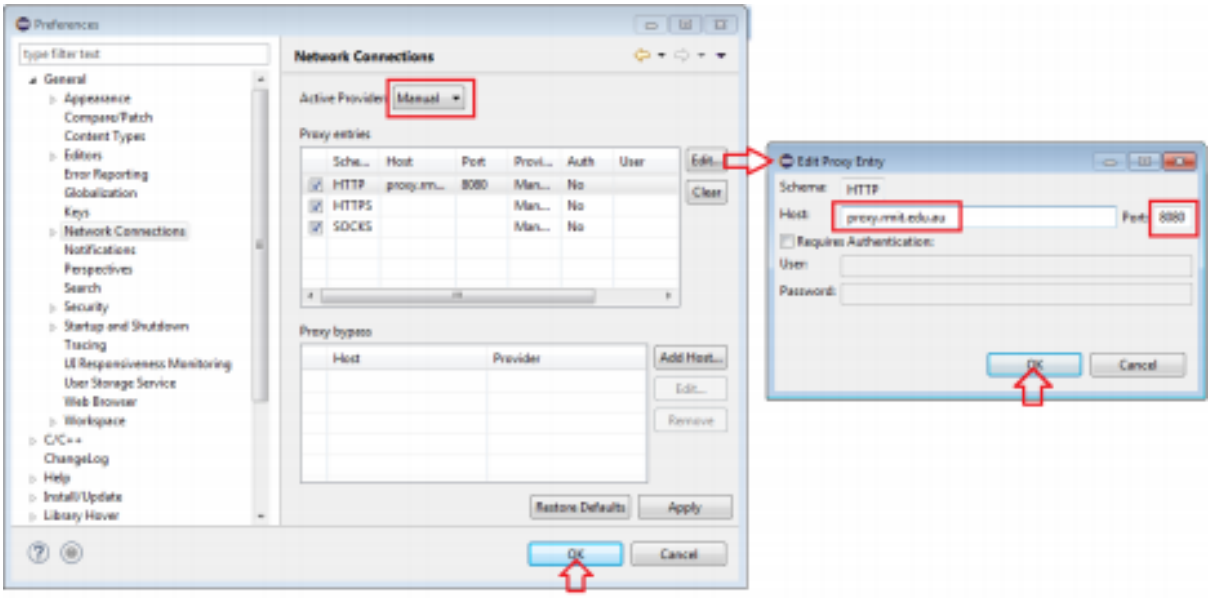


Figure 3-1. Eclipse setup for Internet.

STEP 2:

Installing python environment using Eclipse Graphical Interface[1]. 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:

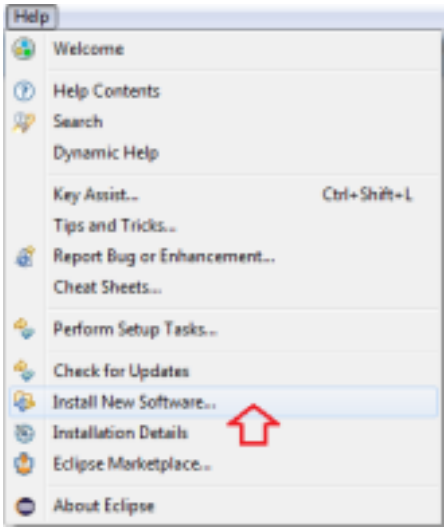


Figure 3-2. Step 2

b. In the next screen, add the update site(s) you want to work with (see the figure below). The available update sites are (see Figure 3):

- http://pydev.org/updates

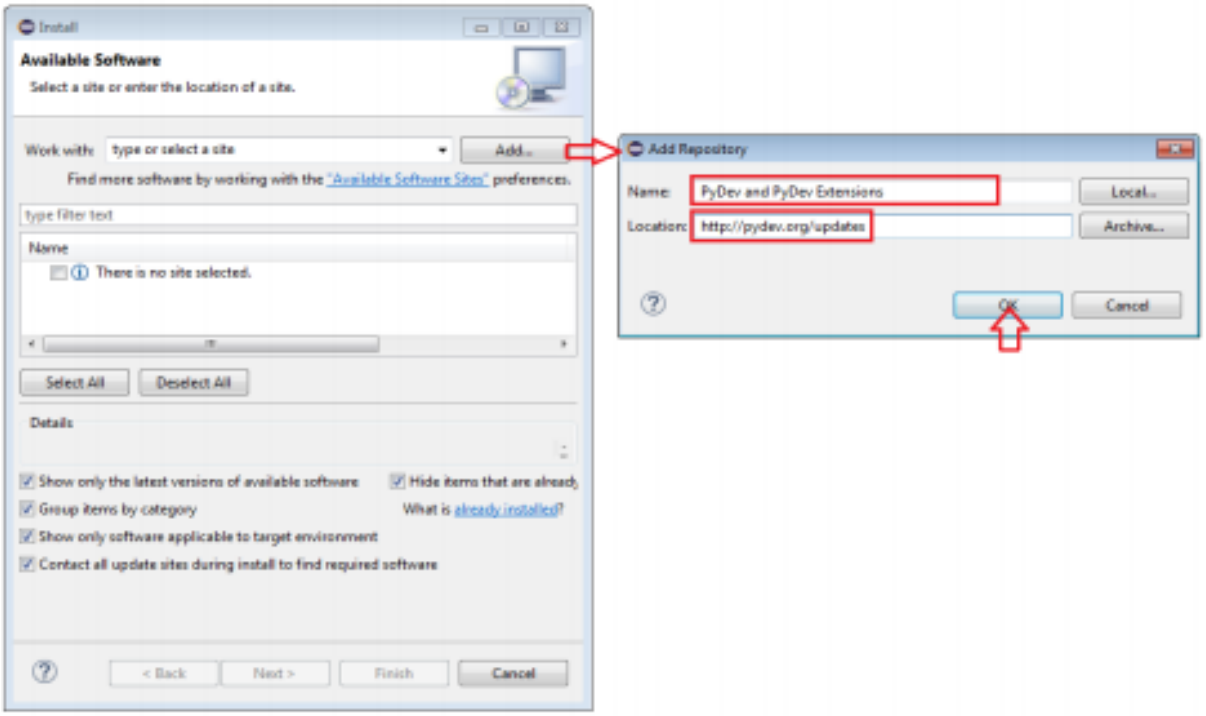


Figure 3-3. Set up Python on Eclipse

c. After entering the update sites, select the update site you entered or select "All available sites" and add a filter for PyDev, so that it shows the contents of all the update sites that have PyDev, then select what you want to install and click 'Next' (see Figure 4).

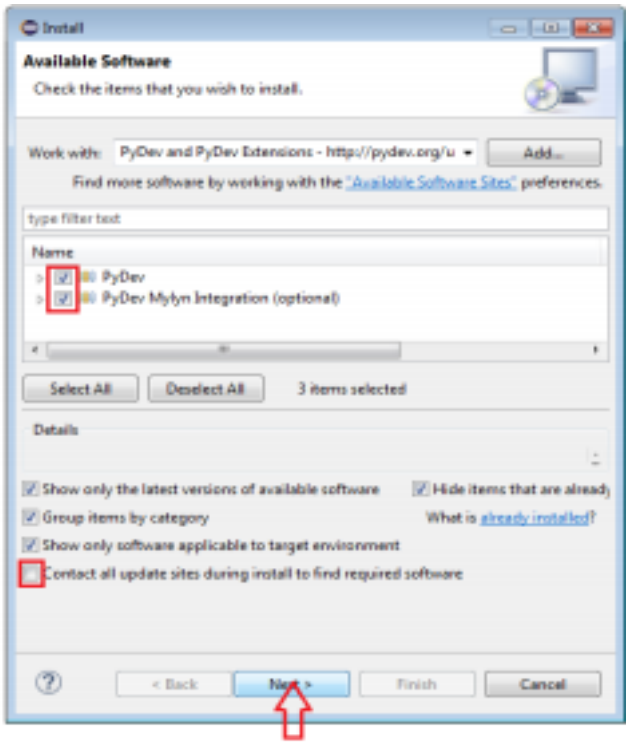


Figure 3-4. Set up Python on Eclipse.

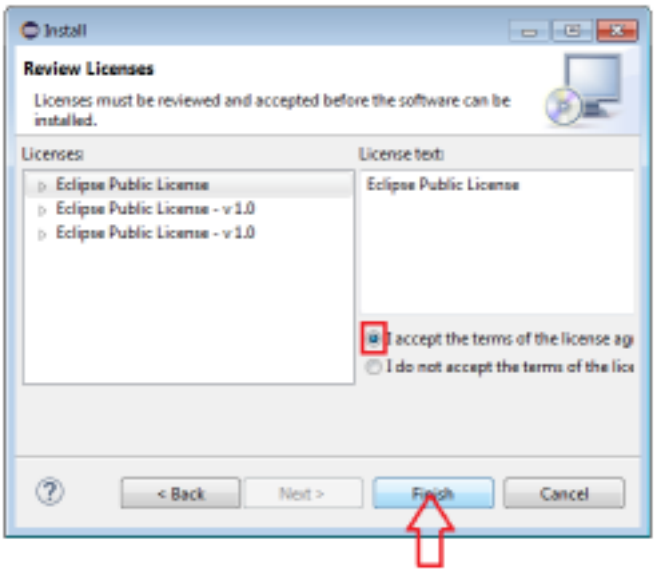


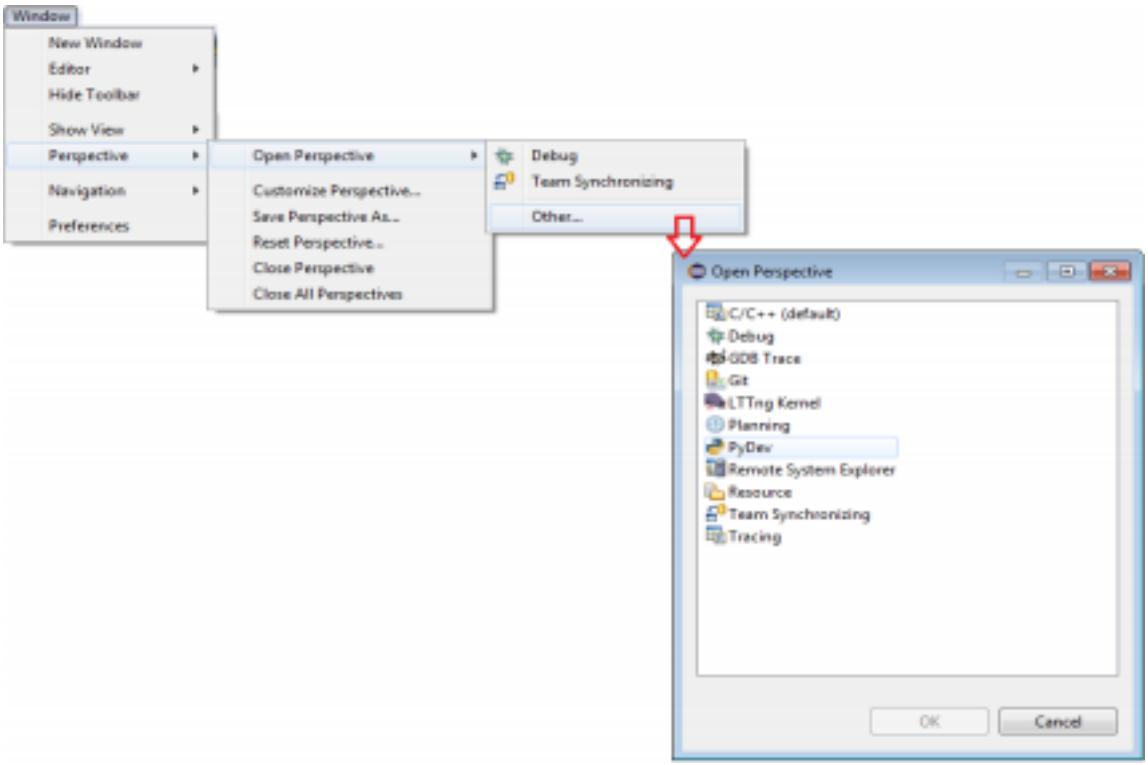
Figure 3-6. Set up Python on Eclipse.

f. At that point, Eclipse should automatically download the plugin contents and present you to a dialog asking if you want to restart (to which you should say yes). ✔ 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 space is the section where all your python projects are visualized, · Project Editor is the section where python scripts can be edited,

· Console allows the visualization of results father running a python script

· Run bottom allows to run a python script,



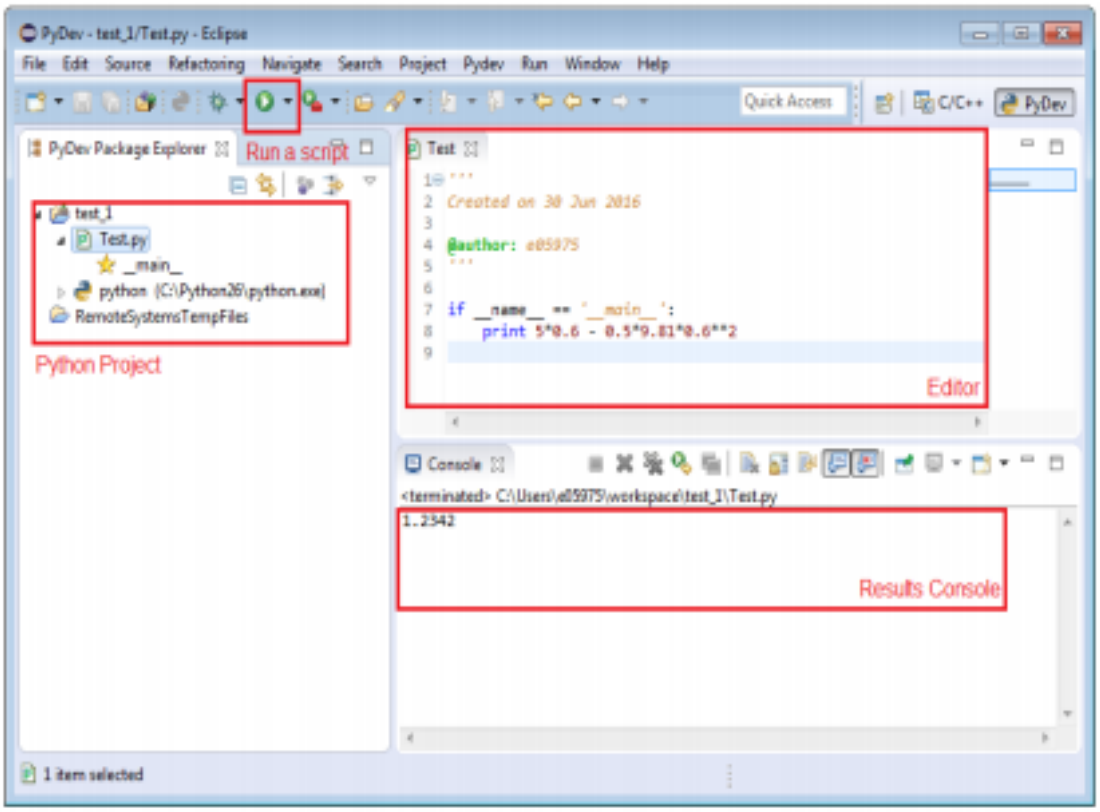
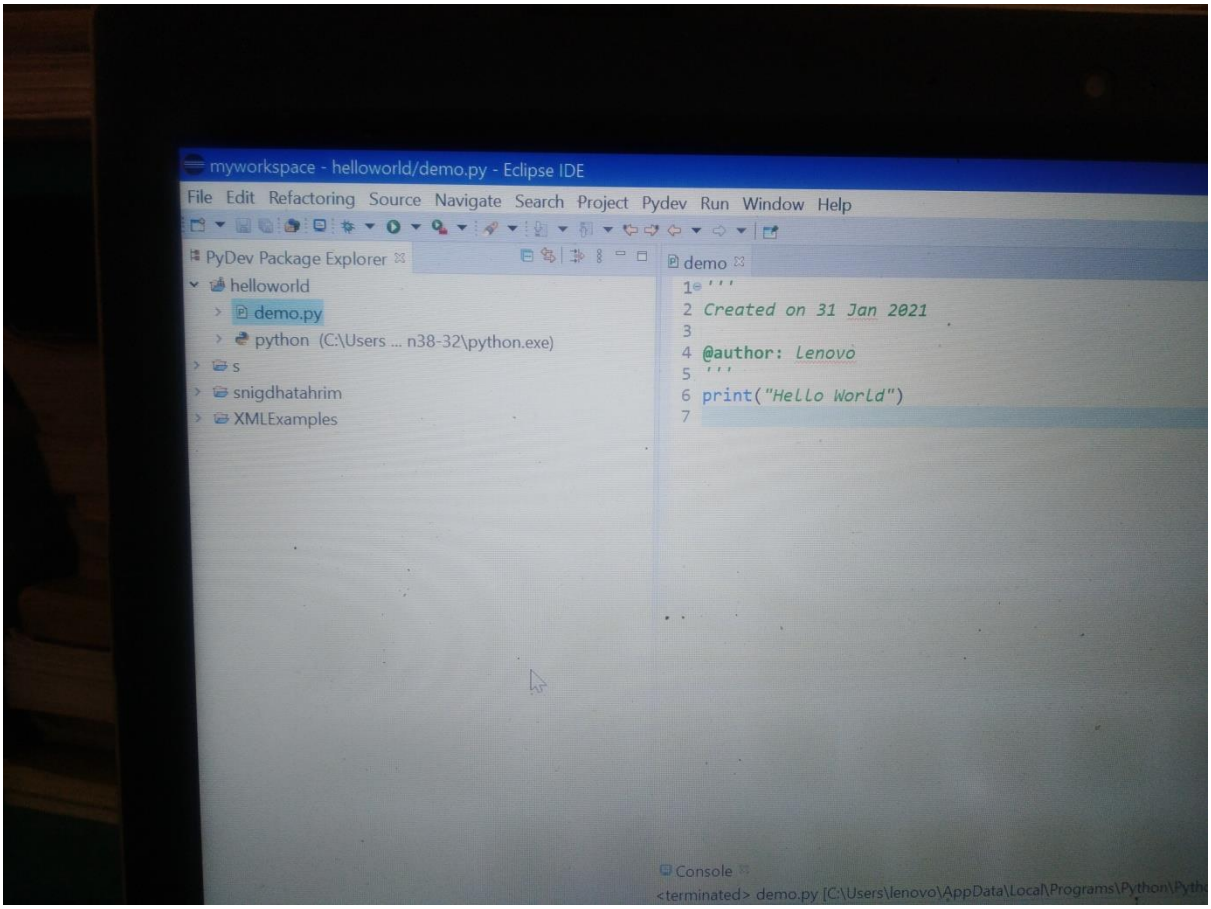


Figure 3-8. Python perspective environment.

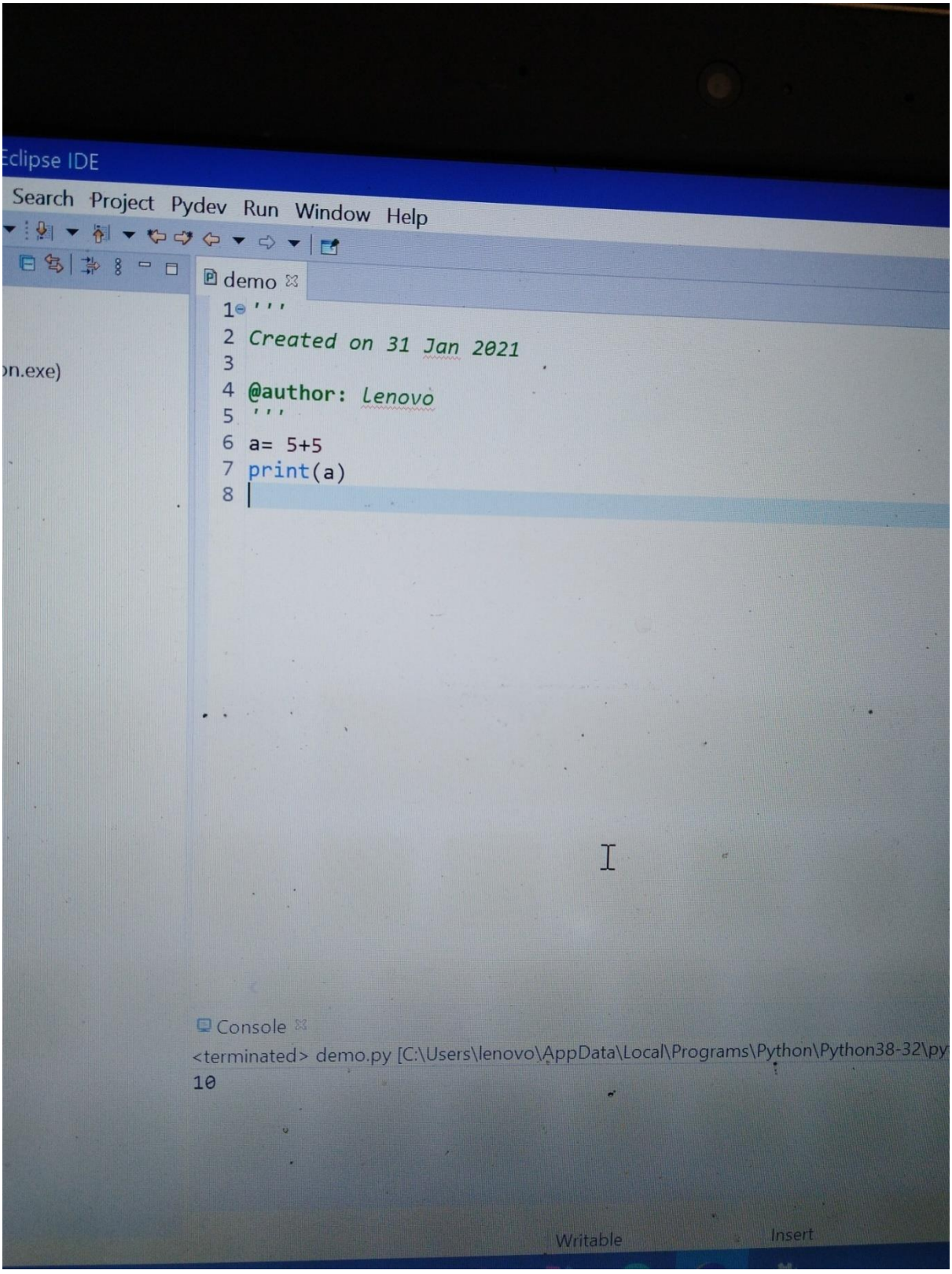
Exercises

Section 4.1 Basics of Python and Programming

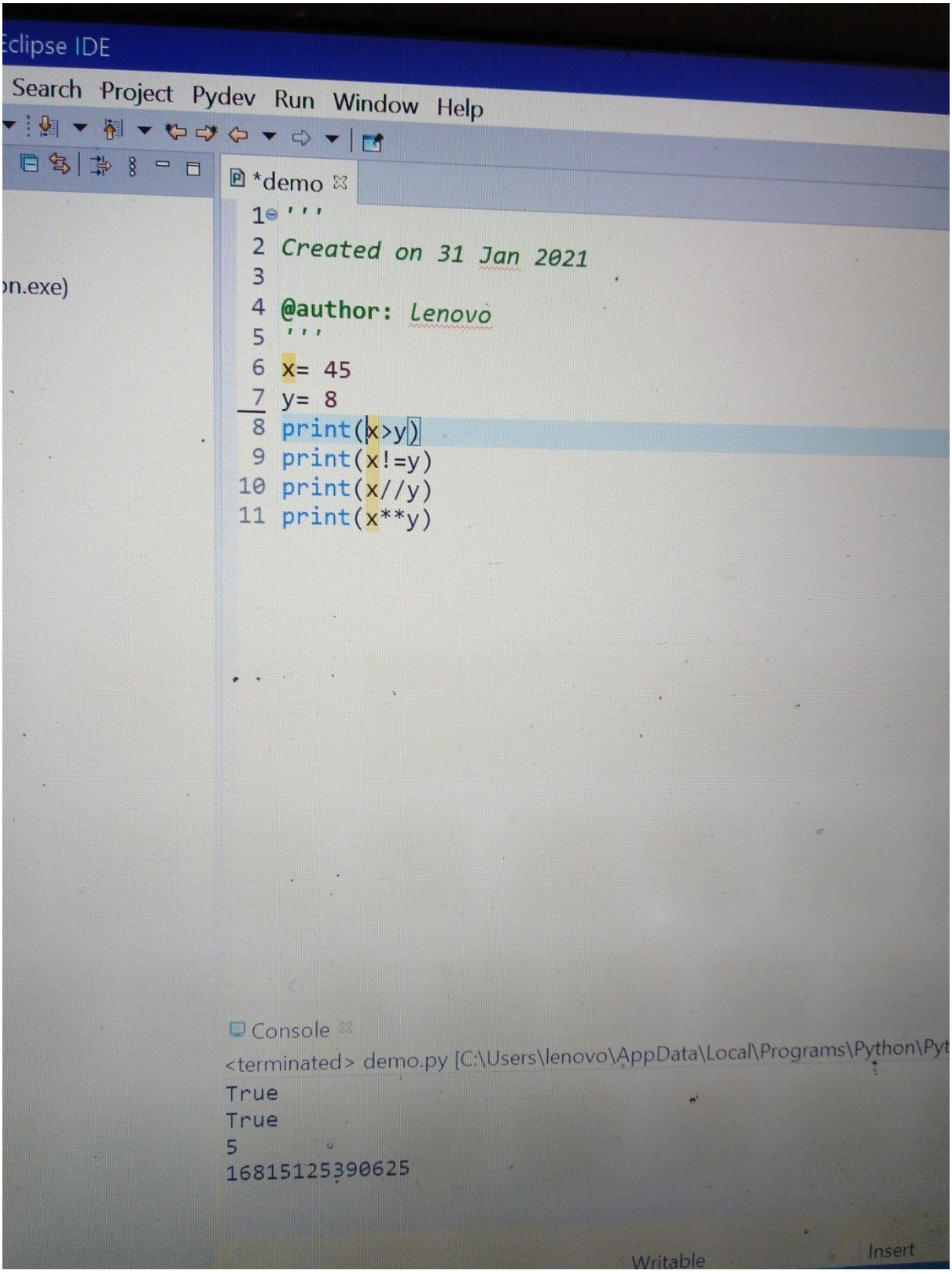
Exercise 4.1.1:create a python project



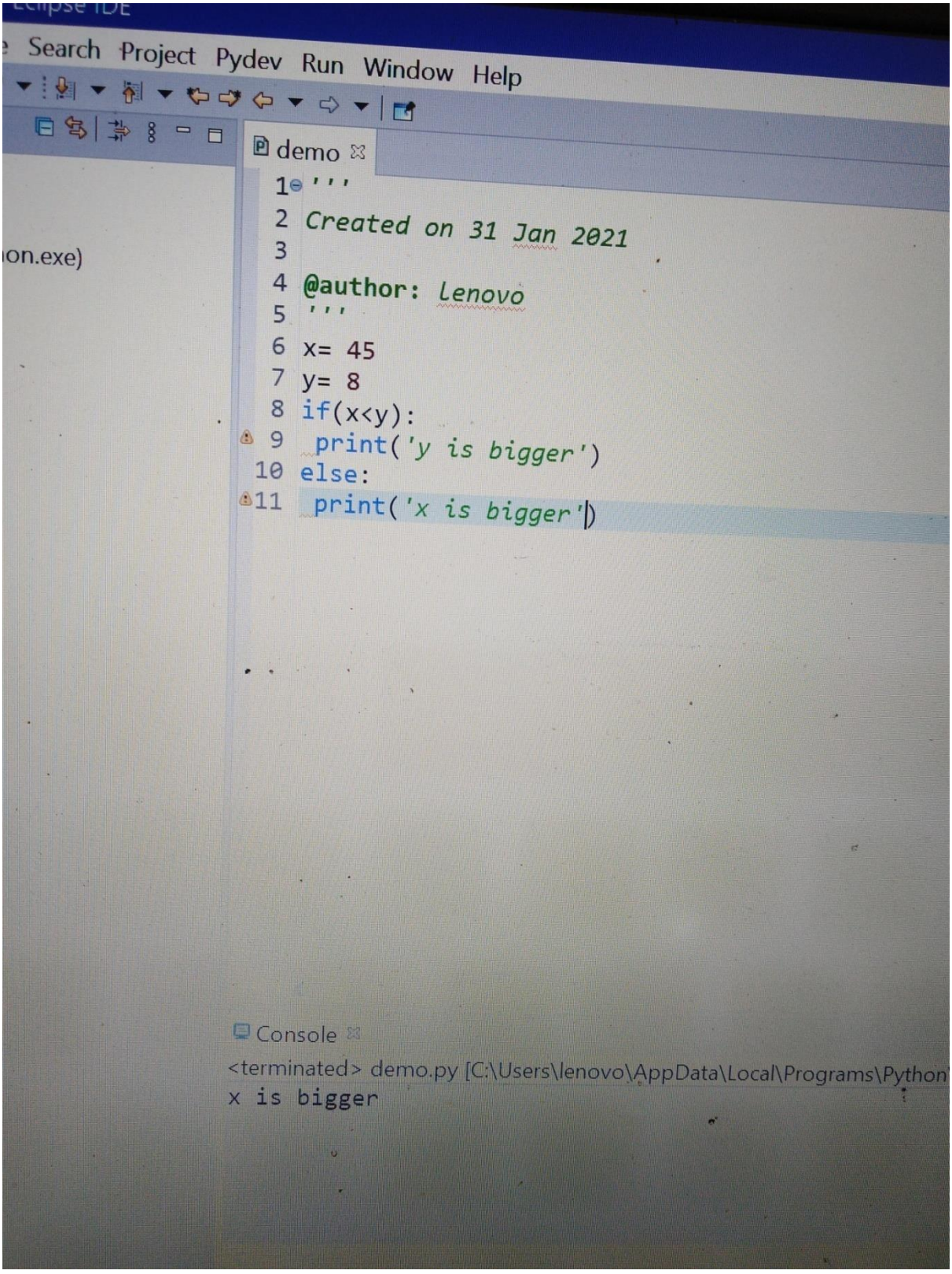
Exercise: compute numbers



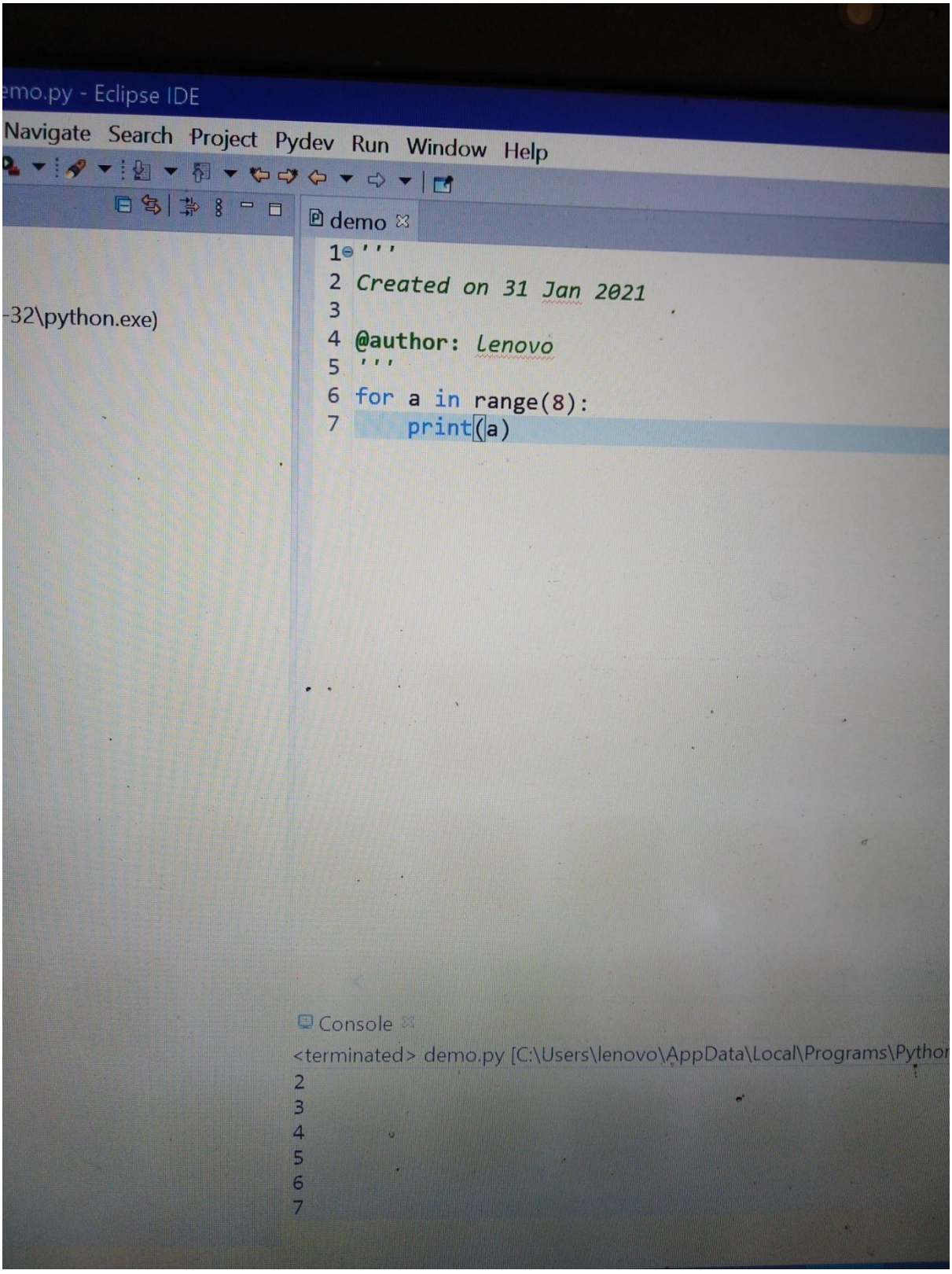
Exercise: create examples



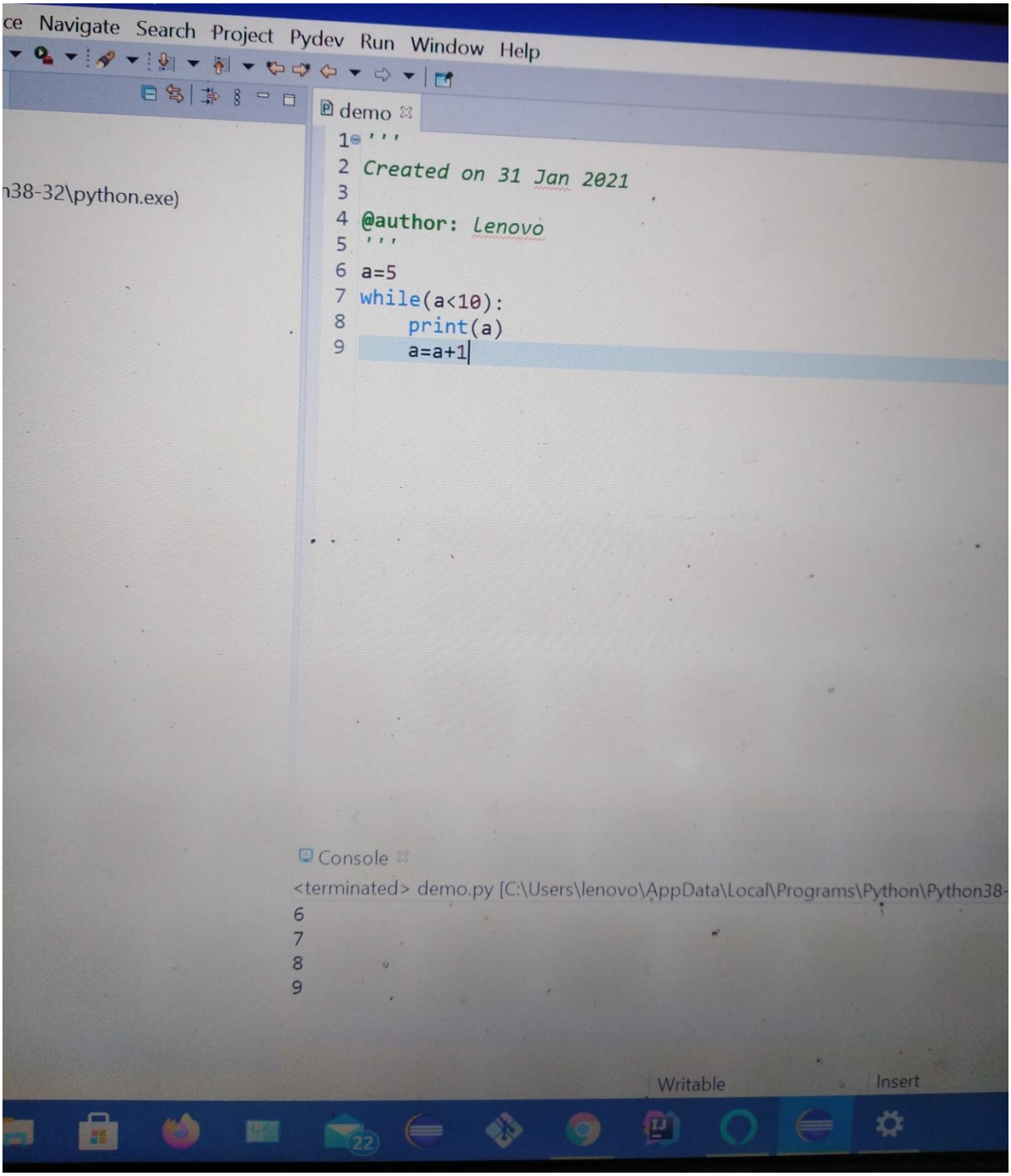
Exercise : IF statement



Exercise : for statement



Exercise: While statement



Conclusion :

Python supports both function-oriented and structure-oriented programming. It has features of dynamic memory management which can make use of computational resources efficiently. It is also compatible with all popular operating systems and

platforms. Hence this language can be universally accepted by all programmers.