Faculty of Engineering South Eastern University of Sri Lanka	Course	BSc Eng (Hons)
	Semester	1
	Subject	CS 13001 Introduction to Computing

SEU/IS/...../EG/.....

Lab Session 1: Starting Coding in Python

Lab Objectives:

1) Understanding what programming is and why we programme?
2) Working in Command Prompt environment.
3) Learning to use Atom text editor.
4) Starting coding in Python 3.

1. Introduction to Programming

Exercise 1: What is the function of the secondary memory in a computer?

a) Execute all of the computation and logic of the program

b) Retrieve web pages over the Internet

c) Store information for the long term, even beyond a power cycle

d) Take input from the user

Exercise 2: What is a program?

Exercise 3: What is the difference between a compiler and an interpreter?

Exercise 4: Which of the following contains "machine code"?

a) The Python interpreter

b) The keyboard

c) Python source file

d) A word processing document

2. Opening Command Prompt

Command Prompt is a way of interacting with the computer – like clicking with a mouse. It is a Command Line Interface where you type line by line and tell the computer what to do, as opposed to a Graphical User Interface where you click on icons.

Press the Window key, type 'cmd', and press enter to launch Command Prompt.

Table 1: Basic Commands for Windows

Command	Function
cd	Change directory
dir	List files in a directory
cls	Clear Command Prompt
python	Launch Python interpreter
quit()	Quit Python interpreter

2. Using the Python Interpreter

Type 'python' in the command prompt.

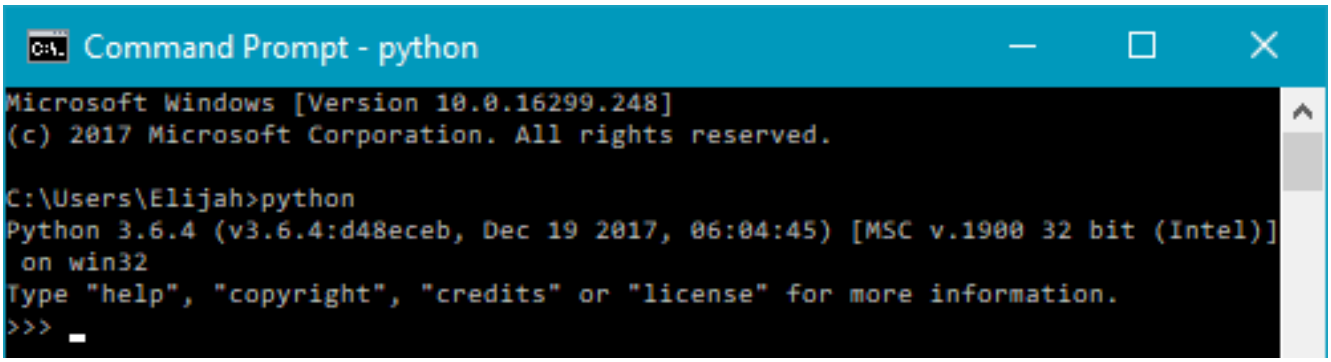

Figure 1: Launching Python interpreter with 'python' command

Exercise 5: Type a code in the Python interpreter to print 'Hello World'

Exercise 6: What is wrong with the following code:

```
>>> primt 'Hello world!'
File "<stdin>", line 1
primt 'Hello world!'
^
SyntaxError: invalid syntax
>>>
```

3. Using Atom text editor

Step 1: Create a new folder in the desktop and name it 'EGXX Python Scripts'.

Step 2: Launch Atom text editor.

Step 3: Close all tabs and go to *File > Settings > Editor.*

Change the following settings:

- Set font size to 14.
- Set Tab Space to 4.

Step 4: Go to *File > New File.*

Type in the following program and save it as hello_world.py in the EGXXX Python Scripts folder on Desktop.

```
1  message = 'hi hello World'
2  print(message)
```

Figure 2: First Python code

Step 5: On Command Prompt, change the working directory using *'cd Desktop/EGXXX Python Scripts'*.

Step 6: Launch hello_world.py using *'python hello_world.py'*

Exercise 7: Where in the computer is a variable such as "x" stored after the following Python line finishes?

x = 123

a) Central processing unit

b) Main Memory

c) Secondary Memory

d) Input Devices

e) Output Devices

Exercise 8: What will the following program print out:

x = 43

x = x + 1

print(x)

a) 43

b) 44

c) x + 1

d) Error because x = x + 1 is not possible mathematically