**CHAPTER 1 “lab gems”**

* **Python must be installed and configured prior to use**
  + One of the items installed is the Python interpreter
* **Python interpreter can be used in two modes:**
  + Interactive mode: enter statements on keyboard
  + Script mode: save statements in Python script
* **When you start Python in interactive mode, you will see a prompt**
  + Indicates the interpreter is waiting for a Python statement to be typed
  + Prompt reappears after previous statement is executed
  + Error message displayed If you incorrectly type a statement
* **Statements entered in interactive mode are not saved as a program**
* **To save a program use script mode**
  + Save a set of Python statements in a file
  + The filename should have the .py extension
  + To run the file, or script, type

python *filename*

at the operating system command line

* **IDLE (Integrated Development Program): single program that provides tools to write, execute and test a program**
  + Automatically installed when Python language is installed
  + Runs in interactive mode
  + Has built-in text editor with features designed to help write Python programs

**Lab Exercise 1**

**Focus**

1. Python interpreter

2. Number conversions

3. ASCII storage

**Part A: Interactive Mode**

1. Start the Python interpreter.

2. At the >>> prompt type the following statement and press enter. Please type only the portion shown in italics.

***print(‘Hello World!’****)* <press enter>

3. After you press the enter key you should see the following:

>>> print(‘Hello World!’)

Hello World!

4. If you see an error message, enter the statement again till you can see the printed message.

5. Save your file and then close the Python interpreter.

Take screen shot, upload to Blackboard

**Part B: Number Conversions**

Convert the following numbers from decimal to **binary**. Show all the steps you followed in the process. Do this step using a word processor. Save the file with the name

*lastname\_firstname\_numbers\_lab1* where you will use your own first and last name.

a. 34

b. 5678

c. 256

d. 16

e. 8

**Part C: ASCII Sequences**

Write your city of birth in English. Now, write the city in **ASCII** by looking up the ASCII codes in Appendix C of the Gaddis text. You can also find the ASCII collating sequence table at the IBM site:

http://publib.boulder.ibm.com/infocenter/iadthelp/v7r0/index.jsp?topic=/com.ibm.etools.i

series.langref.doc/c0925395690.htm

do binary and decimal conversions

Save the file with the name *firstname\_lastname\_ascii\_lab1* where you will use your own first and last name.

**Turn In**

All labs will be graded in Blackboard. Once you are done with the lab turn it in to the Lab 1 link.

For this lab you will turn into Blackboard:

1. The Python Interactive file you saved in part A

2. The *numbers* file you saved in part B

3. The *ascii* file you saved in part C