**CIS 105**

**Programming Lab Information and Instructions**

**General Information**

All lab work is to be submitted to Blackboard by the dates listed in the syllabus. The page numbers in the labs refers to the textbook in use for the class.

Each student will submit two separate files in the Assignment area for the Labs. These files include:

1.) The source code (XXX.py)

2.) A screen print of the input/output in an MS Word file.

Note: If you don’t know how to submit multiple files in Blackboard, please see the following instructions: <https://bbcrm.edusupportcenter.com/link/portal/8197/8382/Article/4209/How-do-I-upload-multiple-files-for-the-same-Blackboard-Assignment>

***Note Lab 10 has two problems. You will need to submit one source file (XXXX.py) for each problem. The screen dumps of the input/output can be submitted in one MS Word file for both problems.***

**Naming Format for the MS Word file:** Use the following construction to name the screen print of the input/output file that is submitted to Blackboard:

First NameLast Name Lab # X. Insert the correct lab number for the “X”.

If a student is named John Smith and he is submitting his first lab, the correct file name is: John Smith\_Lab1.docx.

The due dates for the labs are listed in the Schedule section of the Syllabus. All page numbers in the following lab assignments refer to pages in the textbook.

***All labs are graded according to the Lab Rubric. You can view this rubric by clicking on Submit Labs in the Blackboard Assignments area and then selecting “View Rubric”. You can also download the rubric in the Course Downloads: Lab Rubric in Blackboard.***

**Lab 1**

*Exercise 1 Personal Information (p.104)*

**Lab 2**

*Exercise 3 Land Calculation (p.104)*

**Lab 3**

*Exercise 4 Roman Numerals (p. 152)*

**Lab 4**

*Exercise 12 Software Sales (p. 154)*

**Lab 5**

*Exercise 2 Calories Burned (p. 203)*

**Lab 6**

*Exercise 15 Use nested loops to draw pattern (p. 206)*

**Lab 7**

*Exercise 8 Paint Job Estimator (p. 261)*

**Lab 8**

Create a file of integers in a file named: numbers.txt with the following data:

1, 2, 4, 5, 7, 12, 15, 27, 38, 19, 78, 152, and 8.

Write a program that reads the file and displays the numbers in the file and calculates the sum digits.

**Lab 9**

A local driver’s license official has asked you to create an application htat grades the written portion of a driver’s license exam. The exam has 20 multiple choice questions with the following correct answers:

1. A 2. B 3.A 4. D 5. A

6. C 7. C 8. D 9. B 10. C

11. C 12. A 13. A 14. B 15. D

16. A 17. B 18. C 19. D 20. B

Your program should store the correct answer in a list. The program should read the student’s answers for each of the 20 questions from a text file and store his or her answers in another list. Use the following data for your test file:

1. A 2. A 3.A 4. D 5. A

6. C 7. C 8. D 9. B 10. C

11. C 12. D 13. B 14. B 15. D

16. A 17. B 18. A 19. D 20. B

After the student’s answers have been read from the file, the program should display a message indicating whether the student passed or failed the exam. A student must answer 15 of the 20 questions to pass the exam. The program should also display the total number of correctly answer questions, the total number of incorrectly answered questions, and a list showing the question numbers that were incorrectly answered.

**Lab 10**

*Problem 1:*

Write a program that asks the user for a string containing their first, middle, and last names. The program will modify the input to display the initials that were entered. If a person enters “NA” as the middle name, then the program should display only the initials of the first and last name. Use the following strings to test the program:

Alfred E. Newman A.E.N.

John NA Smith J.S.

*(Note: Provide screen dumps of the results of these two test cases in the submission file.)*

*Problem 2:*

Write a program that lets the user enter a string and displays the string that was entered and the most frequently occurring character in the string. The program can treat upper and lower-case characters the same. If there is tie, then both characters should be output. Use the following strings to test the program:

The House on Haunted Hill

Python programming is fun

Gone with the Wind

*(Note: Provide screen dumps of the results of each of the three test cases in the input/output screen dump submission file.)*

**Lab 11**

Exercise 1 Course Information (p. 455)

**Lab 12**

Exercise 2 Car Class (p.547)