CSCE A101, Introduction to Computer Science
Assignment 3
Due: July 27, 2025
40 points

Complete the following programming problems. Be sure to use good style and documentation (worth about 10% of the point total; see the ***DocumetationAndStyle.pdf*** file on Blackboard). Add output screenshots of your programs in Word file. When complete, please **zip your files together (.py and .docx files)** and upload to Blackboard. The title of zip file should be Name-StudentID.zip

1. Design a program that asks the user to enter a series of 20 numbers. The program should store the numbers in a list then display the following data:
    *   The lowest number in the list
    *   The highest number in the list
    *   The total of the numbers in the list
    *   The average of the numbers in the list

2. The local driver's license office has asked you to create an application that grades the written portion of the driver's license exam. The exam has 20 multiple-choice questions. Here are the correct answers:

1. A	6. B	11. A	16. C
2. C	7. C	12. D	17. B
3. A	8. A	13. C	18. B
4. A	9. C	14. A	19. D
5. D	10. B	15. D	20. A

    Your program should store these correct answers in a list. The program should read the student's answers for each of the 20 questions from a text file and store the answers in another list. (Create your own text file to test the application.) 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 correctly answer 15 of the 20 questions to pass the exam.) It should then display the total number of correctly answered questions, the total number of incorrectly answered questions, and a list showing the question numbers of the incorrectly answered questions.

3. Find the following files in the Assignment 4 folder:
    *   GirlNames.txt This file contains a list of the 200 most popular names given to girls born in the United States from the year 2000 through 2009.
    *   BoyNames.txt This file contains a list of the 200 most popular names given to boys born in the United States from the year 2000 through 2009.

    Write a program that reads the contents of the two files into two separate lists. The user should be able to enter a boy's name, a girl's name, or both, and the application will display messages indicating whether the names were among the most popular.

4. Find a text file named 1994_Weekly_ Gas_Averages.txt in the Assignment 4 folder. The file contains the average gas price for each week in the year 1994.

(There are 52 lines in the file.) Using matplotlib, write a Python program that reads the contents of the file then plots the data as either a line graph or a bar chart. Be sure to display meaningful labels along the X and Y axes, as well as the tick marks.