Zelle Chapter 8 Coding Assignment

Exercise 1

Write a program to process a series of integers entered by the user at the console. Sense the end of user input by testing for a sentinel value (just <Enter>). Control reading and processing with a `while` loop. Upon reaching the end of user input, use the `break` statement to exit the loop.

Keep track of the count of even and odd values. At the end of processing inputs, print the results of processing. If there were no values entered, print a message to that effect. Otherwise, print counts of even and odd values.

Test your program thoroughly. Make sure that it produces correct output when no integer values are entered.

Exercise 2

Begin by making a copy of your exercise 1 code and renaming it appropriately. Make the following enhancement to the program:

 • Change the main processing loop so that it no longer users a `break` statement.

Test your program thoroughly. Make sure that it produces correct output when no integer values are entered.

Exercise 3

Begin by making a copy of your exercise 2 code and renaming it appropriately. Make the following further enhancements to the program:

 • Replace the console input with input from a text file.
 • When you get that working, further enhance the program so that multiple integers may be entered on each line of the input file. Multiple integers on the same line should be separated by spaces.

Test your program thoroughly. Make sure that it produces correct output when the input file is empty (contains 0 lines).

Exercise 4

Follow the example that I provided in the tutorial video to create a program that demonstrates Python Boolean logic features by printing truth tables. Print truth tables for:

- P and Q
- P or Q
- DeMorgan's Law Version 1: not(P and Q) == not P or not Q
- DeMorgan's Law Version 2: not(P or Q) == not P and not Q

Tools

Use PyCharm to create and test all python programs.

Submission Method

Follow the process that I demonstrated in the beginning of the semester regarding submitting your work. This involves:

- Locating the directory associated with your project in the file system.
- Compressing that directory into a single .ZIP file using a utility program.
- Submitting the properly named zip file to the submission activity for this assignment.

Due By

Please submit this assignment by the date and time shown in the Weekly Schedule.