Lab Rules

1. **Lab File Naming Convention**
   - Student's in CPT187 should use the following naming convention when submitting their lab assigments:
     Lastname_Firstname_LabCHP-NUM_name_of_the_lab_as instructed_in_the_textbook.py
   - Example, for Lab 10-2, here is the correct file name for the file to be submitted in Blackboard by me:
     `Sanders_Beau_Lab10-2_enhanced_word_counter.py`
   - Data files should follow the naming convention in the textbook and restated in each lab in Blackboard with no other changes.
   - There will be point deductions for labs submitted with incorrect file names

2. **Documentation Guidelines**
   - **Follow these instructions for all coding labs in CPT187**; students not following all of these instructions for documentation will have points deducted from non-compliant lab submissions; documenting programming code files is an important part of learning how to become a programmer
   - Beginning with Lab01-3, all lab program and module files (.py) must be correctly documented
   - **Program and module files (.py pronounced "pie") must have the following documentation**:
     - The **student's name, date submitted, course-section number, and lab number** in the comments at the beginning of the file; for example:
       `#!/usr/bin/env python3` [this is a required line used to define the interpreter]
       `# Beau Sanders, August 21, 2023, CPT187-W12, Lab01-3`
     - After the line containing the student's name there should be a comment (starts with #) **explaining what the program or module file is designed to do**
     - All functions and blocks of code should be preceded with a comment line (starts with #) to **explain or define what the function or block of code is designed to accomplish**; students are expected to document the code provided by the textbook publisher; do not assume the comments in the textbook provided files are sufficient, students should write their own documentation
     - **Data files (.txt, .csv, and .bin) should NOT have any documentation comments lines** because that could result in causing the related program or module to not run properly

3. **Data Files and Modules Needed for Labs To Run Properly**
   - **IMPORTANT**: When submitting labs, it is each CPT187 student's responsibility to include everything that is needed to grade the labs. This includes any data files (.txt, .csv, and .bin) created by your programs or read by your programs. This also includes module files (.py). If a student does not include the required data files, they will be graded accordingly.

- **Example of a lab file that is well documented and shows the student's full understanding of the code**:

```
#!/usr/bin/env python3
## Jane Doe, June 12, 2022, CPT168-W17, Lab05-1
## Program:           Test and Debug a Test Scores Program
## Associated File(s):python/exercises/ch05/test_scores.py
## Purpose:           Test and debug the test scores program to
##                    demonstrate ability to find and debug logic
##                    errors.

# display a welcome message
## print functions are all correct, no debugging needed
print("The Test Scores application")
print()
print("Enter test scores")
print("Enter 'x' to end input")
print("======================")

# initialize variables
## assume that all scores start at 0
counter = 0
score_total = 0
test_score = 0

## two if else codes in while True: divided up by breakpoint
## while x is entered, program ends
while True:
    test_score = input("Enter test score (or 'x' to quit): ")
    if test_score != "x":
        test_score = int(test_score)
        ## counter += 1
        ## this is = counter + 1 for an 'x' entry
        ## 'x' entries do not need to be counted
        ## debugging error is here
    else:
        break
    ## if test score 0-100 is entered, program continues
    ## if not, score is discarded, error message prints.
    if test_score >= 0 and test_score <= 100:
        ## score total = score total + new test score
        score_total += test_score
        ## numerator: counter = counter + 1
        ## this is where the counter needs to be
        counter += 1
    else:
        print("Test score must be from 0 through 100. Score discarded. Try again.")

# calculate average score
## formula: a_s = s_t / number of tests (counter)
## this formula is correct, no debugging needed
average_score = round(score_total / counter)

# format and display the result
## end print is correct, no debugging needed
print("======================")
print(f"Total Score: {score_total}"
      f"\nAverage Score: {average_score}")
print()
print("Bye")
```

- **Video tutorial about documenting CPT187 lab coding files** (requires CPT187 shared password - CPT187/function): https://beausanders.org/CPT187/content/videos/How_to_Document_CPT187_Labs_220831_1052.mp4

4. No ZIP Files

- CPT187 students will NOT be submitting any lab exercises in compressed ZIP files. If a student needs to submit multiple lab files, then attach each file separately to the Blackboard lab assignment.

Please email your instructor if you have any questions about CPT187 Labs and how to submit them.

-Beau Sanders - sandewbs@my.gvltec.edu
CPT187 Course Lead Instructor

Last Updated: Monday, January 9, 2024