COP-2210 – Lab 7

Objective

Students will be able to develop Java programs involving iteration statements, implementing exercises that require the use of the WHILE and DO-WHILE loop statements.

Guidelines

- The assignment is to be completed in pairs.
- Questions are based on content discussed in the Lecture and book readings.
- NetBeans is the IDE of choice.
- Students are expected to attend each lab session and actively participate in the lab activities.
- Lab should be completed and submitted by the end of the lab time. Extra time would be considered on a case by case analysis and last day to submit would be Friday.
- To submit, upload your lab solutions to the dropbox in Canvas.
- Make sure you include the information of the developers as a comment in the first lines of each program of the lab:

Student Name: _____   Student Name: _____
Panther ID: _____   Panther ID: _____
Week: _____
Section: _____

Lab Questions

The lab involves completing a number of questions from the Chapter 6 of our textbook.

1) **A variation of E6.2 c.** Write a program that computes all powers of 2 from 2^0 up to 2^{20}, using a WHILE loop.

2) **A variation of E6.2 a.** Write a program that computes the sum of all even numbers between 2 and 100 (inclusive), using a DO-WHILE loop.

3) Write a program that computes the average of a list of numbers entered by the user. The numbers are supposed to be in the range 50 – 100 (inclusive) and the user will indicate that he/she is done with data input by entering a value not in that range. At least one number will be in the range. Use a WHILE or a DO-WHILE loop.

4) **A variation of Exercise 3 in Lab 5** Write a program that presents the user a menu of four choices, "Circle", "Square", "Rectangle", and "Exit" to calculate the area of one of these geometric objects. Once a choice is made, the program would ask the user for the data required to do the calculation. For example, if the user input were "Circle", the program would prompt the user to enter the value of the radius of the circle. The program will let the user run area calculations until "Exit" is entered. Use a WHILE or a DO-WHILE loop.

Grading Rubric

Lab grade is 10 points (out of 1000 total course points). Question weights are as follows:

Question	Points
1	2 pts
2	2 pts
3	3 pts
4	3 pts

Answers will be graded based on correctness, completion, and organization.