CIS 236 – Programming in C

Program:	**Week 04**
Points:	**20**
Chapters:	**4**

Description

Write a program to process a collection of daily stock prices. The user will enter a series of stock prices and will type -99 when there are no more prices to enter. As each price is entered, the program will determine if it is a high price, an average price, or a low price. At the end of the program, display the number of high prices entered, the number of average prices entered, and the number of low prices entered. Then display the average price of all the prices entered.

Learning Objectives

In this assignment, you will practice:

- Using a repetition control structure with a nested selection structure
- Displaying formatted output to stdout

Requirements

1. Your code must use a sentinel-controlled loop. Stop the repetition when the user enters the sentinel value -99.
2. The average price output must display using two places after the decimal.
3. The price will be entered as an integer.
4. High stock prices are 85 and higher.
   Average stock prices are in the range 60-84, inclusive.
   Low stock prices are under 60.
5. All **prompts and output must display exactly** as demonstrated in the sample run below.

Sample Run

```
Enter the price (-99 to stop): 55
Enter the price (-99 to stop): 62
Enter the price (-99 to stop): 68
Enter the price (-99 to stop): 74
Enter the price (-99 to stop): 59
Enter the price (-99 to stop): 45
Enter the price (-99 to stop): 41
Enter the price (-99 to stop): 58
```

```
Enter the price (-99 to stop): 60
Enter the price (-99 to stop): 67
Enter the price (-99 to stop): 65
Enter the price (-99 to stop): 78
Enter the price (-99 to stop): 82
Enter the price (-99 to stop): 88
Enter the price (-99 to stop): 91
Enter the price (-99 to stop): 92
Enter the price (-99 to stop): 90
Enter the price (-99 to stop): 93
Enter the price (-99 to stop): 87
Enter the price (-99 to stop): 80
Enter the price (-99 to stop): 78
Enter the price (-99 to stop): 79
Enter the price (-99 to stop): 72
Enter the price (-99 to stop): 68
Enter the price (-99 to stop): 61
Enter the price (-99 to stop): 59
Enter the price (-99 to stop): -99

Number of high prices is 6.
Number of average prices is 14.
Number of low prices is 6.

Average price is 71.23
```

Requirements for Full Credit on This Project

SUBMIT YOUR OWN WORK – Plagiarism is not tolerated in this course. Please review the section on the Academic Honor Code in the syllabus. I will not hesitate to drop you from this class if you submit a program that is plagiarized.

COMPLETE AND ACCURATE – Your program must compile, execute, and give accurate output.

FOLLOW ALL REQUIREMENTS ACCORDING TO THE INSTRUCTIONS – Follow the instructions as written for completing this project, even if you [think you] know a "better" way to do something.

COMMENTS – Include comments in your code. There must be a comment at the top of your program that includes your name, the program number, and a description of the program. There must be comments at each important step in your program that describes that step. Every variable must include a comment describing its purpose.

BEST PRACTICES – Follow best practices in C programming as discussed in class and in the textbook, including, but not limited to, appropriate use of white space, indenting, alignment,

meaningful identifier names, etc. Points will be deducted for sloppy code that is hard to read, even if it works, so pay attention to these details.

SUBMIT ONLY .c SOURCE CODE – Pay attention to the file extension of the source code file you submit. I will deduct points for not following this requirement.

SUBMIT ALL FILES BEFORE THE DUE DATE – Submit your .c source code file to the dropbox for this assignment on Canvas before the due date. Do not submit executable files. Do not submit project files from an IDE. I will not accept links to online storage.