

## Lab 6: Review (Group A)

### CS133, Beginning Programming: C#

The objective of this lab is to review all you've learned about C#, especially selection statements. You'll use both if and switch statements. You'll also review reading and writing programming logic using pseudocode.

Complete the following Programming Problems from the end of Chapter 4 in the textbook.

#### 6. Book Club Points

Serendipity Booksellers has a book club that awards points to its customers based on the number of books purchased each month. The points are awarded as follows:

- If a customer purchases 0 books, he or she earns 0 points.
- If a customer purchases 1 book, he or she earns 5 points.
- If a customer purchases 2 books, he or she earns 15 points.
- If a customer purchases 3 books, he or she earns 30 points.
- If a customer purchases 4 or more books, he or she earns 60 points.

Create an application that lets the user enter the number of books that he or she has purchased this month and displays the number of points awarded. (Gaddis 263)

#### 8. Body Mass Index Program Enhancement

In Programming Problem 6 in Chapter 3, you were asked to create an application that calculates a person's body mass index (BMI). Recall from that exercise that the BMI is often used to determine whether a person is overweight or underweight for their height. A person's BMI is calculated with the following formula:

$$BMI = Weight \times 703 \div Height^2$$

In the formula, weight is measured in pounds and height is measured in inches. Enhance the program so it displays a message indicating whether the person has optimal weight, is underweight, or is overweight. A person's weight is considered to be optimal if his or her BMI is between 18.5 and 25. If the BMI is less than 18.5, the person is considered to be underweight. If the BMI value is greater than 25, the person is considered to be overweight. (Gaddis 263)

#### 11. Time Calculator

Create an application that lets the user enter a number of seconds and works as follows:

- There are 60 seconds in a minute. If the number of seconds entered by the user is greater than or equal to 60, the program should display the number of minutes in that many seconds.
- There are 3,600 seconds in an hour. If the number of seconds entered by the user is greater than or equal to 3,600, the program should display the number of hours in that many seconds.
- There are 86,400 seconds in a day. If the number of seconds entered by the user is greater than or equal to 86,400, the program should display the number of days in that many seconds. (Gaddis 264)

Gaddis, Tony. *Starting out with Visual C# 2012 (with CD-Rom), 3/e, 3rd Edition*. Pearson, 06/2013. VitalBook file.

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### Files to Submit to Moodle

- A document containing screenshots of the applications you wrote for the Programming Problems running (label each screen-shot).
- Zipped VS solution folders for each problem.
- The completed code review form for your lab work.
- A copy of the code review you gave to your code review partner.