Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CSII/Chapter 5/Section 5.2 LAB:Conditionals

Write a well formatted program to accomplish each of the following programs.

1. A bagel shop charges 75 cents per bagel for orders of less than a half-dozen bagels and

charges 60 cents per bagel for orders of a half-dozen or more bagels. Write a program

that requests the number of bagels ordered and displays the total cost. (Test the program

for orders of four bagels and a dozen bagels.)

1. A copy center charges 5 cents per copy for the first 100 copies and 3 cents per copy for

each additional copy. Write a program that requests the number of copies as input and

displays the total cost. (Test the program with the quantities 25 and 125.)

1. Write a program that requests three scores as input and displays the average of the two

highest scores.

1. The current calendar, called the Gregorian calendar, was introduced in 1582. Every year

divisible by four was declared to be a leap year, with the exception of the years ending in

00 (that is, those divisible by 100) and not divisible by 400. For instance, the years 1600

and 2000 are leap years, but 1700, 1800, and 1900 are not. Write a program that requests

a year as input and states whether it is a leap year. (Test the program on the years 1994,

1995, 1900, and 2000.)

1. Write a program that reads a test score from a text box each time a button is clicked and

then displays the two highest scores whenever a second button is clicked. Use two class level

variables to track the two highest scores.

1. Write a program to determine the real roots of the quadratic equation $ax^{2}+bx+c=0$

(where $a\ne 0$) after requesting the values of a, b, and c. Ensure that *a* is nonzero.

Note: The equation has 2, 1, or 0 solutions depending on whether the value of b^2 - 4\*a\*c is

positive, zero, or negative. In the first two cases, the solutions are given by the quadratic formula

(-b ± Sqrt(b^2 - 4\*a\*c))/2\*a). Test the program with the following sets of coefficients:

*a* = 1 *b* = -11 *c* = 28 Solutions are 4 and 7

*a* = 1 *b* = -6 *c* = 9 Solution is 3

*a* = 1 *b* = 4 *c* = 5 No solution