Graded Tasks

Lab Task 1

Draw a flow chart that reads an unspecified number of integers, determines how many positive and negative values have been read, and computes the total and average of the input values (not counting zeros). Your program ends with the input **0**. Display the average as a floating-point number, number of positive integers and number of negative integers.

Lab Task 2

Write a program that displays the following table (note that 1 kilogram is 2.2 pounds):

Kilograms	Pounds
1	2.2
3	6.6
...	
197	433.4
199	437.8

Lab Task 3

Use a loop to find the smallest integer **n** such that n^2 is greater than 12,000.

Lab Task 4

A Boutique is having a five-day sale. Each day, starting on Monday, the price will drop 10% of the previous day's price. For example, if the original price of a product is $20.00, the sale price on Monday would be $18.00 (10% less than the original price). On Tuesday the sale price would be $16.20 (10% less than Monday). On Wednesday the sale price would be $14.58; on Thursday the sale price would be $13.12; and on Friday the sale price would be $11.81. Develop a solution that will calculate the price of an item for each of the five days, given the original price. Test the solution for an item costing $10.00.

Lab Task 5

Mary Smith, a student, has borrowed $3,000 to help pay her college expenses. After setting up a budget, $85 was the maximum monthly payment she could afford to make on the loan. Develop a solution to calculate and print the interest, the principal, and the balance on the loan per month. Other information she would like to know is the number of years and months it will take to pay the loan back and the total interest she will pay during that period. The interest rate is 1% per month on the unpaid balance. Keep in mind these formulas:

interest_normal = balance*interest_rate
payment = balance – interest
new_balance = balance - payment