Week 6 Lab: Arithmetic, Input & Output, Selection

Submit:

1. Write a C++ program to calculate y from the following formula:

    $$y = \frac{(15x - 15)(9x + x^2 + 20)}{(6x^2 + 2)(9 - x^2)}$$

    where x is an input from a keyboard.

2. Write a program that calculates and prints the monthly paycheck for an employee. The nett pay is calculated after taking the following deductions:

    Federal Income Tax: 15%
    State Tax: 3.5%
    Social Security Tax: 5.75%
    Medicare Tax: 2.75%
    Pension Plan: 5%
    Health Insurance: RM75.00

    Your program should prompt the user to input the gross salary and the employee name. The output will be **displayed to a screen** and **stored in a file**. Format your output to have two decimal places. The output MUST follow the following format as illustrated in the example below:

Bill Robinson	
Gross Salary:	RM3573.00
Federal Tax:	RM 536.25
State Tax:	RM 125.13
Social Security Tax:	RM 205.56
Medicare Tax:	RM 98.31
Pension Plan:	RM 178.75
Health Insurance:	RM 75.00
Nett Pay:	RM2356.00

    Note that the first column is left-justified and the right column is right-justified.

3. An internet service provider has three different subscription packages for its customers. It should ask which package the customer has purchased and how many hours were used. It should then display the amount due. Be sure the user only select package A, B, or C. Treat any other character as an error. The number of hours used in a month CANNOT exceed 744. Based on the pseudo code that you have developed last time for this problem (one of the in-class activities during problem solving lecture), write its respective C++ program.

Package	Package Details
A	For RM 9.95 per month 10 hours of access are provided. Additional hours are RM2 per hour.
B	For RM 14.95 per month 20 hours of access are provided. Additional hours are RM1 per hour.
C	For RM 19.95 per month unlimited access is provided.

Instruction:

1. This lab MUST be submitted by **Tuesday (01/11/11)** before 4 p.m. at my office.
2. For all exercises, you are required to submit a **PRINTED hardcopy** for each.
3. For all exercises, you are required to **print a sample output** for each
4. Failure to submit this lab on time will cost you **5 marks/day**.