CSCE 206 Spring 2020 Lab Assignment: #1

Submission Deadline: 23:59, Feb 9th, 2020 (Sunday).

1. Follow the submission guideline in the below link and make the submission through eCampus. https://prathiksha1995.github.io/CSCE206//Submission.html
2. Add comments to your code including your name, UIN and the class section you are in with block comments to the head of your code file.

PROBLEM 1: Jogging Tracker (30 points).

Consider yourself as a fitness enthusiast who jogs for 5 days a week, from Monday to Friday. Write a program that takes the distance of jogging as input for these five days and computes the average distance for the week. The program should ask the user for the number of miles jogged on each day (Monday to Friday) and save the values in **five different** variables. The program should first calculate the **total miles** jogged and store the result in a new variable named **sum**. The program should then compute the **average miles** and store it in a new variable named **average**. Display the total and the average distances on the screen.

Name your program file as **Hw1_q1_code.c**

TIP: Use **scanf** and **printf** functions. Also use **float/double** data type for all variables.

Example input: (Text in purple is what the program should print on the screen to instruct the user, text in black is what the user types in)

Input the miles jogged on Monday: 5.5

Input the miles jogged on Tuesday: 1.2

Input the miles jogged on Wednesday: 2.3

Input the miles jogged on Thursday: 4

Input the miles jogged on Friday: 3.4

Example output:

Sum = 16.4 miles

Average = 3.28 miles

PROBLEM 2: Swap two numbers (40 points).

Write a program to swap two numbers. Include code to perform this using **two approaches**.

1. **Using a temporary variable.**
2. **Direct swap between the two variables.**

Name your program file as **Hw1_q2_code.c**

TIP: Use **scanf** and **printf** functions. Also use **float/double** data type for all variables.

Example input: (Text in purple is what the program should print on the screen to instruct the user, text in black is what the user types in)

Enter x and y: 1.3 9.5

Example output:

Before swapping: x=1.3, y=9.5

After swapping using a temporary variable: x=9.5, y=1.3

After direct swapping the variables: x=9.5, y=1.3

PROBLEM 3: Billing Software

A customer buys two items at a store. Each item can be bought in any quantity. Write a program that asks the user to enter the price and quantities of each item individually, and computes the total cost. Additionally, the store is giving a 5% discount on the total purchase as an inaugural offer. After computing the total cost, apply a 5% discount on the total and display the new discount and the new total cost.

Name your program file as **Hw1_q3_code.c**

TIP: Use **scanf** and **printf** functions. Also use **float/double** data type for prices and **int** type for quantities.

Example input: (Text in purple is what the program should print on the screen to instruct the user, text in black is what the user types in)

Enter the price of Item A: $65.9

Enter the quantity of Item A that you purchased: 2

Enter the price of Item B: $33.2

Enter the quantity of Item B that you purchased: 10

Example output:

Total cost = $463.8

Discount = $23.19

Total cost after discount = $440.61