ESET 269 – Lab 2 Math, Logic, and Relational Operations

Use the Lab Template project for the lab if using Keil and the Launchpad.

Code 1(5 pts): Create a program that prompts a user to select from the following three menu items, hamburger, pizza, or chicken strips. The choice is entered as a character. For example, A for hamburger, B for pizza, and C for chicken strips. After the user enters the food choice, they are asked if they would like to make a combo. The choice is entered as a character. Y for yes and N for no. Finally, a user will prompted to enter a quantity as an integer. The program will then calculate the final price including a 8.25% sales tax. Prices for the items are as follows

Hamburger – $6.99 no combo, $8.99 combo

Pizza - $3.99 no combo, $5.99 combo

Chicken strips - $5.99 no combo, $7.99 combo

Example console window display is given below.

```
Select a menu item.
A. Hamburger
B. Pizza
C. Chicken Strips
A
Make a combo? Y for yes or N for no
N
Quantity:2
The total price is $15.13
```

```
Select a menu item.
A. Hamburger
B. Pizza
C. Chicken Strips
B
Make a combo? Y for yes or N for no
Y
Quantity:2
The total price is $12.97
```

Code 2(5 pts): Create a program that prompts a user to enter a login name and password. The correct login name is `Admin`, and the correct password is `PASS`. If both login name and password are correct, display Login Complete to the console window. If the login name or password is wrong, display what is wrong to the console window. Example console window output is shown below.

```
Enter user name:admin
Enter password:PASS
Wrong login name

Enter user name:Admin
Enter password:pass
Wrong password

Enter user name:Adf
Enter password:3423
Wrong login name and password

Enter user name:Admin
Enter password:PASS
Correct Login
```

Code 3(10 pts): Write a program that will prompt a user to enter a systolic blood pressure (SBP) and diastolic blood pressure (DBP) value. The program will then compute the following parameters

- Pulse Pressure (PP) $PP = SBP - DBP$
- Mean Arterial Blood Pressure (MAP) $MAP = \frac{2(DBP+SBP)}{3}$

Based on what is entered, use the table below to display the blood pressure category to the console window.

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER

The code has the following requirements

- SBP, DBP, and PP are *integer* data types
- MAP is a *float* data type

Example console window output is shown below.