Week1 – LabB

Submission Requirements:

1. Include only screenshots in the Word document (.docx) for each question, showing your work and testing results. Ensure that the contents of the screenshots are readable.
2. Submit the Python source code files (.py) separately for each question.
3. Name the Word file 'Lab1B.docx.'
4. Arrange the screenshots in the same order as the questions provided below.

Specific Requirements for Python Programs:

1. Your code must be properly commented.

2. At the top of your program, there must be 3~5 lines of comments with your full name and the date/time when you completed the programs.

Questions:

Q1 (30 points): Write a program `Lab 1B01.py` that prompts for input and displays the following information:

- Your name
- The city where you were born
- Your favorite sports team
- Your undergraduate major

The screenshot of your program execution would look like the following:

```
What's your name: Beifang
Where were you born? China
Your favourite team? Boston
What is your undergraduate major? Information Systems

My name is  Beifang
I was born in  China
My favorite team is Boston
My undergraduate major is  Information Systems
```

Q2 (35 points): A car's miles per gallon (MPG) can be calculated with the following formula:

MPG = Miles driven ÷ Gallons of gas used

Write a program “Lab1B02.py” that asks the user for the number of miles driven and the gallons of gas used. It should calculate the car's MPG and display the result.

Note: To format floating point output with a dollar sign and commas, to two decimal places, use the String class's format() method like so: print('The MPG is ${:,.2f}'.format(mpg)).

The screenshot of your program execution would look like the following:

```
Enter total miles driven, up to two decimals : 155.67
Enter total gallons used, up to two decimals : 8.9

Miles driven is 155.67
Gallons used is 8.9
The MPG is $17.49
```

Q3 (35 points): Write a program "Lab1B03.py" that calculates the total amount of a meal purchased at a restaurant. The program should ask the user to enter the charge for the food and then calculate the amount of an 20% tip and 5% meal tax. Display each of these amounts and the total.

Note: you may use functions round() and format() together for output. For example, to print tax value, you may use "print('Tax is $' + format(round(tax,2), ",.2f"))" statement.

The screenshot of your program execution would look like the following:

```
Enter meal amount, dollars and cents: 123.45

Meal costs $123.45
Tip is $24.69
Tax is $6.17
Total is $154.31
```