

Week 9 (File I/O)

Exercise 1

Write a python program to add new numbers into text file (write), calculate and display the total and average from the text file (read).

You are required to use Python Function, Module and File (I/O) for the following requirement:

1. 4 modules are required: Main, Menu, Add and Calculate.
2. Menu module: Sample output as below. Accept input and return when it called.

```
1. Add new numbers
2. Calculate numbers
Choice: |
```

3. Add module: Enter numbers (separate with comma) into a text file (write).

```
Choice: 1
```

```
Enter numbers (separate with comma):2,4,5,6,7,5
```

```
1. Add new numbers
2. Calculate numbers
Choice: |
```

4. Calculate module: Able to read and calculate the total and average (read) and display the answers.

```
1. Add new numbers
2. Calculate numbers
Choice: 2

Total: 29
Average: 4.833333333333333
>>> |
```

5. Main module: to coordinate and manage all modules to perform the task.
6. Text file: name the text file as your choice.

Exercise 2

Write a python program to add new numbers into text file (write), calculate and display the total and average from the text file (read).

You are required to use Python Function, Module and File (I/O) for the following requirement:

1. 5 modules are required: Main, Menu, Display, File and Calculate.
2. Menu module: Sample output as below. Accept input and return when it called. Display the Total.

```
Rainbow Stationary
A4 paper(canon):1
A4 paper(rainbow):1
Long ruler:1
Short ruler:1
Blue Pen:1
Red Pen:1
Black Pen:1
2B Pencil:1
Total: 22.149999999999995
```

3. Calculate module: Calculate the sub-total for each item and total based on the price list below, return the values when it called.

Item	RM
A4 paper (canon)	8.9
A4 paper (rainbow)	7.5
Long ruler	0.85
Short ruler	0.55
Blue Pen	0.65
Red Pen	0.65
Black Pen	0.65
2B Pencil	2.4

Table: Price list

4. File module: Prompt the following message:

```
Do you want to keep a record (y/n):|
```

If user chose 'y' or 'Y' proceed to Display module; if user chose 'n' or 'N', display "Thank you. Please come again" otherwise display "Wrong input. Please try again".

5. Display module: prompt out customer's name and proceed to record the purchase into a text file. Output as below:

```
Do you want to keep a record (y/n):y
Customer name:Mary
Your order is recorded. Thank you and please come again
>>>
```

Text file output:

```
Customer Name:Mary
A4 paper (canon):1 ~ RM:8.9
A4 paper (rainbow):1 ~ RM:7.5
Long ruler:1 ~ RM:0.85
Short ruler:1 ~ RM:0.55
Blue Pen:1 ~ RM:0.65
Red Pen:1 ~ RM:0.65
Black Pen:1 ~ RM:0.65
2B Pencil:1 ~ RM:2.4
Total:22.149999999999995
```

6. Main module: to coordinate and manage all modules to perform the task.
7. Text file: name the text file as your choice.