

101 學年度 Assignment 2

Description

- 本作業必須以「Microsoft Visual Studio 2010 Professional」完成，利用其它軟體完成者將不予計分。
- 開啟「Microsoft Visual Studio 2010」，新增一個「專案」，以你的學號及作業的題號作為專案名稱。例如你的學號為 s123456 且要寫的作業為 Assignment 1 的第 3 題，則你的專題名稱為「s123456_Assignment1_3」。
- 你的專案目錄可能被儲存在"C:\Documents and Settings\Administrator\My Documents\Visual Studio 2010\Projects\s123456_Assignment1_3" in XP 作業系統 or "C:\Users\Administrator\Documents\Visual Studio 2010\Projects\s123456_Assignment1_3" in Windows 7 作業系統。
- 在完成程式撰寫後，完成存檔並關閉 Microsoft Visual Studio 2010 Professional。重複上述動作，進行下一題的作業。
- 當完成所有作業，回到「Projects」目錄，選擇所有要上傳的目錄，例如「s123456_Assignment1_1」、「s123456_Assignment1_2」、「s123456_Assignment1_3」等，並將滑鼠壓在這些目錄上並按滑鼠右鍵，以「傳送到」選項下的壓縮功能進行壓縮，壓縮後將得到此一作業的壓縮檔，例如 s123456_Assignment1_1.zip。之後將此一壓縮檔的檔名改為 s123456.zip，並上傳該檔至虛擬教室。
- 若繳交的內容(含檔案命名方式，目錄名稱)與指定的內容不合，將不被評分。

1. The yearly car registration fee can be found based on an automobile's model year and weight using the following table:

Model Year	Weight	Weight Class	Registration Fee
1990 or earlier	Less than 2700 lbs	1	26.50
	2700 to 3800 lbs	2	35.50
	More than 3800 lbs	3	56.50
1991 to 1999	Less than 2700 lbs	4	35.00
	2700 to 3800 lbs	5	45.50
	More than 3800 lbs	6	62.50
2000 or later	Less than 3500 lbs	7	49.50
	3500 or more lbs	8	62.50

Using this information, write, compile, and run a C# program that accepts automobile's year and weight, and determines and displays its weight class and registration fee.

```
Please enter a year: 1985
Please enter a weight: 2200
The weight class is 1 and the fee is $26.50
請按任意鍵繼續 . . .
```

```
Please enter a year: 1999
Please enter a weight: 2700
The weight class is 5 and the fee is $42.50
請按任意鍵繼續 . . .
```

```
Please enter a year: 2000
Please enter a weight: 4000
The weight class is 8 and the fee is $62.50
請按任意鍵繼續 . . .
```

2. A machine purchased for \$28,000 is depreciated at a rate of \$4000 a year for 7 years. Write, compile, and run a C# program that computes and displays a depreciation table for 7 years. The table should have this form:

```

YEAR      DEPRECIATION      END-OF-YEAR      ACCUMULATED
-----      -----      -----      -----
1           4000           24000           4000
2           4000           20000           8000
3           4000           16000          12000
4           4000           12000          16000
5           4000            8000          20000
6           4000            4000          24000
7           4000             0          28000
請按任意鍵繼續 . . .
```

3. An arithmetic series is defined by the following:

$$a + (a + d) + (a + 2d) + (a + 3d) + \cdots + [(a + (n - 1)d)]$$

a is the first term.

d is the "common difference."

n is the number of terms to be added.

Using this information, write a C# program that accepts the values of a , d , and n .

In addition, this program uses a while loop to display each term and determine the sum of the arithmetic series. Make sure your program displays the value it has calculated.

```
Please enter the value of a: 1
Please enter the value of d: 3
Please enter the value of n: 10
n      Term      Sum
---      -
1       1         1
2       4         5
3       7        12
4      10        22
5      13        35
6      16        51
7      19        70
8      22        92
9      25       117
10     28       145
請按任意鍵繼續 . . .
```

```
Please enter the value of a: 1
Please enter the value of d: 5
Please enter the value of n: 15
n      Term      Sum
---      -
1       1         1
2       6         7
3      11        18
4      16        34
5      21        55
6      26        81
7      31       112
8      36       148
9      41       189
10     46       235
11     51       286
12     56       342
13     61       403
14     66       469
15     71       540
請按任意鍵繼續 . . .
```

4. Four experiments are performed, and each experiment has six test results. The results for each experiment are given in the following list. Write, compile, and run a C# program using a nested loop to compute and display the average of the test results for each experiment.

1st experiment results:	23.2	31	16.9	27.5	25.4	28.6
2nd experiment results:	34.8	45.2	27.9	36.8	33.4	39.4
3rd experiment results:	19.4	16.8	10.2	20.8	18.9	13.4
4th experiment results:	36.9	39.5	49.2	45.1	42.7	50.6

```
Experiment 1
Enter test result 1:
```

```
Experiment 1
Enter test result 1:23.2
Enter test result 2:
```

```
Experiment 1
Enter test result 1:23.2
Enter test result 2:31
Enter test result 3:
```

```
Experiment 1
Enter test result 1:23.2
Enter test result 2:31
Enter test result 3:16.9
Enter test result 4:
```

...

```
Experiment 1
Enter test result 1:23.2
Enter test result 2:31
Enter test result 3:16.9
Enter test result 4:27.5
Enter test result 5:25.4
Enter test result 6:28.6
The average of Experiment 1: 25.433333333333333

Experiment 2
Enter test result 1:
```