Practical Test 1

7 % out of 100 marks

Due Date: Sunday 2nd August 2015 (9:00pm)

This practical test requires you to develop and submit a small program to demonstrate you understand the programming concepts presented from week 1 to week 3.

Create a new C# console application project in Visual Studio and name the project **pracTest1**.

Program description:

Develop a program that collects information about data usage for different types. Then calculate the estimated data usage per month and display the results to the screen.

You should collect and store the following information from the user:

- Email (AVERAGE: 0.02731 MB per email send/receive)
- Web Browsing (AVERAGE: 0.38912 MB per page)
- Video / movie streaming (AVERAGE: 3.00373 MB per min)
- HD movies (AVERAGE: 68.26667 MB per movie)
- Music (AVERAGE: 1.00124 MB per min)
- Apps / games (AVERAGE: 34.98667 MB per app)

Calculate their pay using the following:

- 30 Days per month
- 1024 MB per GB
- For example 50 emails per day, total Email in GB per month 0.04 GB is calculated from 0.02731 (each email) * 50 email per day * 30 days / 1024
- Then the final total of all the data usage per month

Ref: https://www.telstra.com.au/mobile-phones/plans-and-rates/data-usage-calculator#top

Email
How many emails (without attachment) do you send/receive?

0 5 25 50 100 250+

0 0 0.02 0.04 0.09 0.21 (output per Monthly usage in GB)
(AVERAGE: 0.02731 MB per email send/receive)

Web Browsing
How many pages do you visit (including Facebook)?

0 5 25 50 100 250+

0 0.06 0.29 0.57 1.14 2.86 (output per Monthly usage in GB)
(AVERAGE: 0.38912 MB per page)

Video / movie streaming
How much time do you spend watching videos?

0	5min	15min	30min	45min	1hr+	
0	0.44	1.32	2.64	3.96	5.27	(output per Monthly usage in GB)

(AVERAGE: 3.00373 MB per min)

HD movies
How many HD movies do you download?

0	1	2	3	5	15	
0	2	4	6	10	30	(output per Monthly usage in GB)

(AVERAGE: 68.26667 MB per movie)

Music
How much music do you stream or download?

0	5min	15min	30min	45min	1hr+	
0	0.15	0.44	0.88	1.32	1.76	(output Monthly usage in GB)

(AVERAGE: 1.00124 MB per min)

Apps / games (AVERAGE: 34.98667 MB per app)
How many apps or games do you download?

0	1	2	3	6	10+	
0	1.03	2.05	3.08	6.15	10.25	(Monthly usage in GB)

Your program should display appropriate informative prompts (as sample output), collect the data from the keyboard (replace for GUI sliding bar - no require for validation) and store each entry which will be used to display output and be used to calculate the monthly data usage, total usage per month (add 0.009 to round up nearest 2 decimal point for the extra charge) for the customer. The statistic results should could use Math.Round() function to nearest integer percent.

You should output the results a follows:

```
In a typical per Day, how often do you do these activities
while you're not connected to Wi-Fi?

Emails:
0       5       25      50      100     250+
How many emails (without attachment) do you send/receive? 50

Web Browsing:
0       5       25      50      100     250+
How many pages do you visit (including Facebook)? 50

Video / movie streaming:
0       5min    15min   30min   45min   1hr+
How much time do you spend watching videos? 15

HD movies:
0       1       2       3       5       15
How many HD movies do you download? 1

Music:
0       5min    15min   30min   45min   1hr+
How much music do you stream or download? 5

Apps / games:
0       1       2       3       6       10+
How many apps or games do you download? 1
```

```
Based on your answers, your estimated data usage per month is: 5.11GB per month

Emails                 ( 1.00%)
General browsing       (11.00%)
Video / movie streaming (26.00%)
HD Movie               (39.00%)
Streaming music        ( 3.00%)
Downloading apps       (20.00%)
```

Output all to 2 decimal places and right align the output.

Commenting and layout

Ensure you place a comment at the top of the program that contains your full name and student number and a description of the purpose of the program.

Place comments in your code as required and ensure you layout your code appropriately.

Marks will be allocated as follows:

- 30 marks declare appropriate constant and data variables
- 26 marks prompt and collect data
- 14 marks calculate results
- 15 marks display output screen
- 15 marks for comments, code design and layout

Submission instructions:

Zip up the entire project folder and all files and folder within.

Name the zip file sit102-PracTest1-<Student Number>.zip where <Student Number> is replaced with your student number. EG: sit102-PracTest1-323978.zip

Submit the zip file via the Practical Test 1 submission tool in the Assessments folder in the unit web page.