IT Sligo

INSTITIÚID TEICNEOLAÍOCHTA, SLIGEACH
INSTITUTE OF TECHNOLOGY, SLIGO

School of Engineering and Design

Head of School: Mr Shane Fanning

Exam Series: *Semester 2 - Summer*	**Academic Year 2015/2016**

Module Title: **Module Code:**

Introduction To Programming 2 using C# *COMP 06125*

Programme Code(s):	Programme(s) Name(s)	Year(s)	FT /PT (if applicable)
SG_KSYS_B07	*BSC Systems and Networking*	*1*	*FT*
SG_KGDEV_B07	*BSC Game Development*	*1*	*FT*
SG_KWDEV_B07	*BSc Web Development and Creative Media*	*1*	*FT*
SG_KDEV_B07	*BSC Software Development*	*1*	*FT*
SG_KCOMP_H08	*BSC (Honours) Computing*	*1*	*FT*

Internal Examiner(s): Vivion Kinsella

External Examiners: Damien Costello

Instructions to Candidates

Time Allowed:	*2.5 hours*
Number of Questions on Paper:	*2*
Number of Questions to be attempted:	*2*
Compulsory Question:	*N/A*
Any Other Special Instructions:	*See Next Page*

Instructions

1. Name the class files for each question Question1.cs and Question2.cs

2. Upload both these files only to the moodle link in the week starting **May 16th**.

3. It is your responsibility to ensure that the correct work is saved and uploaded correctly.

Question 1 (50 Marks)

A gaming company requires an analysis of its game players. They have collected data containing the gender of each player and the highest level each player has reached on their game.

This data is stored in a comma separated value file *players.txt*, with the format:

```
Player_Number,Gender,Level_Achieved
```

A sample test file can be found in the folder: `s:\clasees\vkinsella\examdata`

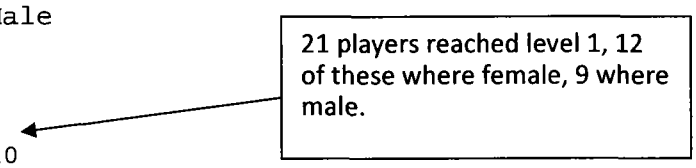
- Develop an application that reads in this data from the file and produces a report with a breakdown of the number of players at each level. There are 6 possible levels, numbered 0 through to 5.
- The report shall also display a count of players by gender within each of the these levels.
- The report will also print the total number of players and the average level (rounded to nearest whole number) achieved by the players.
- The report shall take the format of the example report below.
- Your program shall use a number of methods and make use of arrays to solve the problem.

Sample Report based on data in sample test file

```
Level       Count       Female          Male

0           10          5               5
1           21          12              9
2           45          35              10
3           34          14              20
4           12          10              2
5            0           0              0

Totals Players   122
Average level    2
```



Marks
Correctness (30)
Design/coding/data structures (15)
Readability/Documentation (5)

Question 2 (50 marks)

Write a project with a class that includes the following methods. Include a call to each in the `Main` method to test each method.

i. Using a switch statement write a method that receives a character value as an argument which represents a customer code and returns the number of bonus points they receive based on the table below.

Customer Code	Number bonus points
'A'	50
'S','H','J'	100
'Q'	200
Anything else	0

(10 marks)

ii. Write a method:

```
static int SumOddNums(int n1, int n2)
```

That returns the sum of all even whole numbers between two integer arguments passed to it. For example:

`Sum(5, 10)` returns `24`.

(10 marks)

iii. Write a method that accepts a reference to a string variable as an argument and returns *true* if the argument ends with "ger". Otherwise the method should return *false*.

(10 marks)

iv. Write a method that accepts a reference to an array of integers as an argument and returns the average of every second element in the array, starting from the first. For example, an array with the elements 2,4,8,10,11 will return 7.0.

(10 marks)

v. Write a method to halve the values of two integer arguments that are passed to it. For example if the method is called with two arguments a and b where a equals 4 and b equals 6, then after calling the method a will equal 2 and b will equal = 3.

(10 marks)