***Programming I***

Aptitude Test 2 (Mock)

By: Lee Zhi Wei

Estimated duration: 1 Hour

***Instructions***:

**Prior to the test:**

* Create a folder anywhere on your computer with the Student ID as the name
* Create a python file in that folder with the naming convention

1. APT2M\_S123456789.py

* In the file, enter your **name**, **ID** and **group** in the line as a comment

Eg. # Peter Tan (S23323321) – IT02

In this case, **DO NOT** submit the files to ICTSpace and Brightspace. In the actual test, then submit it to ICTSpace and Brightspace. There is also not a need to zip up the file, since it’s a singular python file.

**Make sure that the DataSet.txt is in the same zip file as this word document.**

**Question 1**

A hospital has stored its database of patient records, including heartrate at admission, age, name and reason for admission in a custom format. The datafile DataSet.txt is given. The data that is given follows an order.

Write a Python program to:

1. Read the data from the file into a list and print the list.

Sample output:

[['James', '160', '84', 'Chest Pain', 'M'], ['Robert', '150', '101', 'Cardiac Arrest', 'M'], ['John', '80', '55', 'Checkup', 'M'], ['Michael', '100', '62', 'Fall in room', 'M'], ['David', '190', '85', 'Stroke', 'M'], ['William', '165', '23', 'Seizure', 'M'], ['Richard', '77', '24', 'Burned by oven', 'M'], ['Joseph', '159', '72', 'Fell down from height', 'M'], ['Thomas', '79', '39', 'Difficulty in breathing', 'M'], ['Charles', '83', '86', 'Chain car accident', 'M']] (6 marks)

1. Compute and display the position number of each patient (eg 1. Robert), the average heart rate for all of the patients, the average age of patients entering the hospital and the most common gender entering the hospital. The following shows the required output.

No Name Age Gender Reason for admission

1 James 84 M Chest Pain

2 Robert 101 M Cardiac Arrest

3 John 55 M Checkup

4 Michael 62 M Fall in room

5 David 85 M Stroke

6 William 23 M Seizure

7 Richard 24 M Burned by oven

8 Joseph 72 M Fell down from height

9 Thomas 39 M Difficulty in breathing

10 Charles 86 M Chain car accident

11 Christopher 98 M Fractured foot

12 Daniel 15 M Abdominal pain

13 Matthew 64 M Migraine

14 Anthony 35 M A cut with excessive bleeding

.

.

.

The average heart rate is 137.07

The average age is 52.03

The most common gender entering the hospital is Male

Given is this nested list:

gender = [['M','F'],['Male','Female']]

You are **required** to use all the elements of the nested list above.

(14 marks)

\*\*\* END OF PAPER \*\*\*