Week 2

Practical Exercises

1. Write a program that opens and processes the data file provided on Vital (W2\_ExerciseData.csv).   
   The file contains data in a simple spreadsheet format that separates two numbers by a comma ‘,’. Currently the file contains two columns (Time, Value). Create a new file with an additional column with values you calculated (Time, Value, Square) where the ‘Square’ column should have the square of the value.

(Excel opens CSV files so you can use it to check and visualise your results)

Hint: use the comma as a third argument of “getline” function (see L2D3) and “stod” to convert the string into double

Questions to think about:

1. What is the difference between implicit and explicit casting of variables?
2. If a = 5, b = 6, c = 8, d=2 what will be the value of ‘e’ after this operation?  
   e = a + b \* c – d;  
   e=(a+c)%d-c\*d;
3. What does this programme do? Can you explain its output?

**#include <iostream>**

**using namespace std;**

**void main()**

**{**

**const int SIZE = 3;**

**double a[SIZE]={22.2,44.4,66.6};**

**double x;**

**x = a[3];**

**cout << “x = “ << x << endl;**

**system (“pause”);}**

1. What is the difference between ‘*global’* and ‘*local’* variables?