# Assignment 1 – STRUCTURES

A day’s weather record contains the following:

* the date (three integers representing the day, month, year)
* the meteorologist’s name on duty that day (a string of up to 12 characters)

* hours of sunshine (double)
* rainfall in millimeters (double)
* midday temperature in degrees (double)

A typical record looks as follows:

**12 1 2009 tommy 3.4 12.5 9.5**

A file contains a text version of the weather data for the last 30 day month. (30 records)

Set up a file with test data to test your program.

Write a program that reads this data into a table (ie an array of suitable structs) and then repeatedly answers queries about the data.

**Write a menu controlled program allowing the user to make the following queries:**

**1) List the dates when a given meteorologist was on duty.**

**2) Find all the wet days (i.e. rainfall >= 4mm).**

**3) Find all the sunny days (i.e. sun hours >= 5 hours).**

**4) Find the average rainfall between two dates.**

**5) Find the hottest day based on the midday temperature.**

**6) Find the day with the shortest sunshine.**

**7) Exit from the application**

Marks will be attributed to the use of separate functions for each task that is encountered.

Deadline: **Upload your solution to Moodle on or before your practical session in the week beginning October 5th 2015. Sign off during your practical on that week.**

Please have the following available for collection during your practical session:

1. The working version of the above.
2. A verbal explanation of the programs outcome, if requested.
3. Take the appropriate steps to backup your work at all times. Remember, PCs and Servers do fail and lose data.
4. Deadline exceptions can only be made in special circumstances (e.g. provide sick cert).