CS917 Foundations of Computing
Lab 2: Solving Problems in Python

Good afternoon,

In today's session you'll be solving some larger problems with Python.

All resources have been placed on the website.

Good luck,
Adam

Section 1 - Goal Difference

The football.csv file contains the results from the English Premier League. The columns labeled 'Goals' and 'Goals Allowed' contain the total number of goals scored for and against each team in that season (so Arsenal scored 79 goals against opponents, and had 36 goals scored against them).

Write a program to read the file, then print the name of the team with the smallest difference in 'for' and 'against' goals.

Hint: Remember the split method from the previous lecture

Section 2 - Temperature Swing

In weather.csv you'll find daily weather data. Write a program to read the file, then output the day number (column one) with the smallest temperature spread (the maximum temperature is the second column, the minimum the third column).

Section 3 - A Single Method

Both of these are very similar problems, namely calculating the difference between two columns.

Reorganise your code to write a single method which can be used to solve both problems.

Hint: What parameters will you need for your method?

Bonus activity- A Better Way?

Python has a csv library built in (https://docs.python.org/2/library/csv.html). Read the documentation carefully and refactor your program to take advantage of the library.