Lab week 11

1) Using pseudocode express an algorithm that fulfils the following:

Read in a sorted array of integers, A, that has been sorted in ascending order. Find the two integers closest in value and print out these two integers (if there are more than one pair of integers with the same difference in value chose the first instance in the array).

2) Using a flowchart express an algorithm that:
Reads in an array, A, and its average, m, (i.e. you can read in the array and it's average) –illustrates an algorithm for calculating the standard deviation of the array elements.

The formula for standard deviation is

$$\sqrt{\frac{(A[0]-m)^2+(A[1]-m)^2+(A[2]-m)^2+\cdots+(A[N-2]-m)^2(A[N-1]-m)^2}{N}}$$

Where *m* is the average of the array *A*, and *N* is the number of elements in the array.