Practical 4

Part 1:
Download the template from Vula.
Write code which copies the array of words in the template into RAM, starting at the beginning of RAM.
This part is similar to what you did in prac1 in that you will copy data from Flash into RAM. The difference is that you will be copying a lot more data, and hence it is more appropriate to perform the task with a conditional loop rather than hard-coding each copy.
You must use a copy loop to get the marks.
Once it has finished copying, the next instruction should be labeled *copy_to_RAM_complete*
As with Prac1, the automarker will modify the contents of RAM once it hits this label.

Part 2:
The following requires that part 1 is correct.
Iterate through each individual **byte** in the array in RAM, incrementing each byte by 1.
Don't worry about overflows. Increment a byte if and only if it is in the array.
Once this is complete, the next instruction should be labeled: *increment_of_bytes_complete*

Part 3:
The following requires that part 1 and 2 are correct.
Iterate through each byte of the array in RAM and find the highest value (maximum) unsigned byte. Display this on the LEDs.

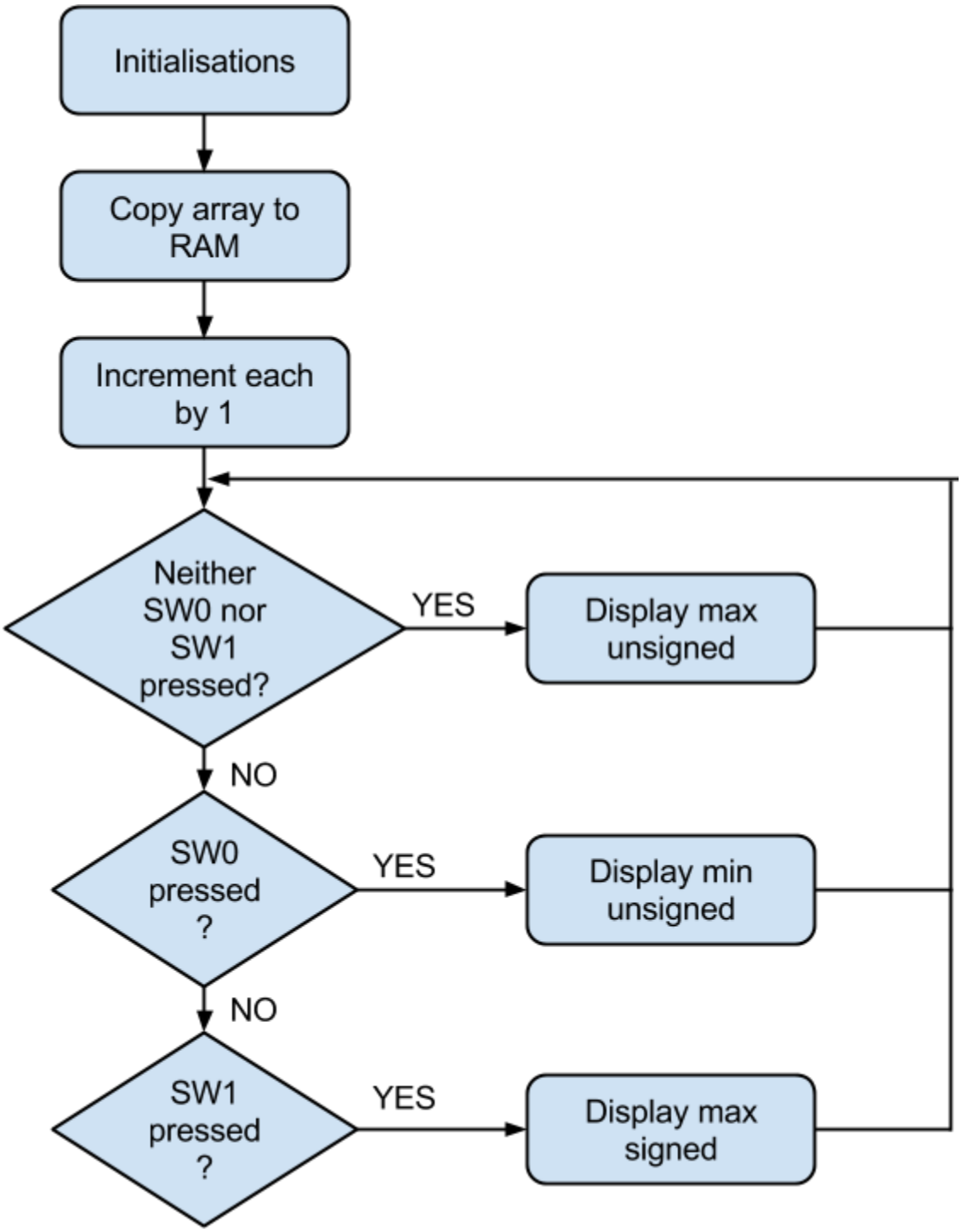
Part 4:
In the event that push-button S0 is held down, change the pattern on the LEDs to rather display the lowest value (minimum) unsigned byte.

Part 5:
In the event that S1 is held down, change the pattern on the LEDs to rather display the highest value **signed** byte.

Bonus:
In the event that S2 is held down, display the temperature of the TC74A0 on the LEDs.

Marking:
Part 1: (3) Part 2: (2) Part 3: (3) Part 4: (2) Part 5: (1) Bonus: (2)

Marked out of: 11
Available marks: 13


Initialisations
Copy array to RAM
Increment each by 1
Neither SW0 nor SW1 pressed?
YES
Display max unsigned
NO
SW0 pressed ?
YES
Display min unsigned
NO
SW1 pressed ?
YES
Display max signed