Assemble and run the following programs using the PIC18 Simulator IDE. Your solution should include a flowchart, the assembler listing, and an annotated screen capture of the simulator showing the final register values.

1. Modify the Data Copy program (IP5-6) to copy only the negative numbers from the SOURCE to a BUFFER starting at 0x20.

SOURCE (Hex): E3, 72, 5D, 81, CC, 34

2. Modify the Highest Temperature program (IP6-4) to count the number of positive readings and copy them to a new table.

BUFFER (Hex): 66, 88, 75, F2, CA, 00