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 **count** and **copy** only the **positive** numbers from the SOURCE to a BUFFER.

   SOURCE (Hex): 63, 9E, B2, 41, 6A, F0

2. Modify the Highest Temperature program (IP6-4) to **also copy** the **below zero** readings to a **new table**.

   BUFFER (Hex): 47, 93, 62, 2C, C2, 00