8-bit Addition

Write a program to add 8 bit variables A and B together, and storing the sum into 8 bit variable C. For this programming problem you may assume that the sum is less than 255 if A and B are unsigned and between -128 and 127 if signed.

    C = A + B

Simulation of the problem C = 170 + 39, where the answer C should equal 209 (0xD1), or the signed problem C = -86 + 39, where the answer should equal -47 (0xD1). Neither solution results in a carry (unsigned) overflow (signed) condition.

Figure 1   Start of 8-bit Addition program with variable A initialized to 0xAA (170_{10} unsigned or -86_{10} signed) and B initialized to 0x27 (39_{10} signed or unsigned).

Figure 2   End of Addition program with variable C containing 0xD1 (209_{10} unsigned or -47_{10})