Maximum Value

Given variables A and B, each holding an 8-bit signed 2's complement number. Write a program to find the maximum value and put into variable C. Example if A > B then C = A.
C = Max(A,B)
Option A: Basic implementation of if-then-else statement using load -> do something -> store structure
Simulation of the unsigned problem C = Max(05,03), where the answer should equal 05 (0x05).

```
reset:
    ;Initialize SRM Variables
    clr   r16
    sts   A, r16
    sts   B, r16
    sts   C, r16
loop:
    ; Test Max1
    ldi   r16, 0x05
    sts   A, r16
    ldi   r16, 0x03
    sts   B, r16
    rcall Max1
    rjmp loop
```

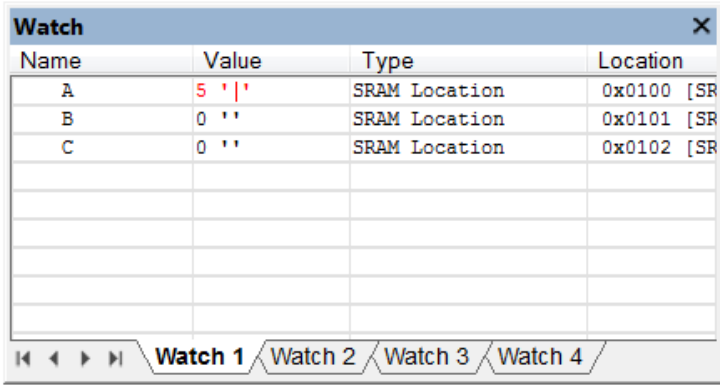

Figure 1: Start of Maximum program with variable A initialized to 0x05 (05_{10})

```
reset:
    ;Initialize SRM Variables
    clr   r16
    sts   A, r16
    sts   B, r16
    sts   C, r16
loop:
    ; Test Max1
    ldi   r16, 0x05
    sts   A, r16
    ldi   r16, 0x03
    sts   B, r16
    rcall Max1
    rjmp loop
```

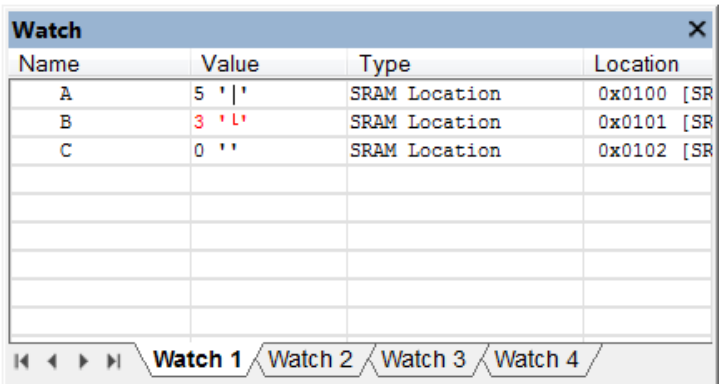

Figure 2: variable B is initialized to 0x03 (03_{10})

```
reset:
    ;Initialize SRM Variables
    clr   r16
    sts   A, r16
    sts   B, r16
    sts   C, r16
loop:
    ; Test Max1
    ldi   r16, 0x05
    sts   A, r16
    ldi   r16, 0x03
    sts   B, r16
    rcall Max1
    rjmp loop
```

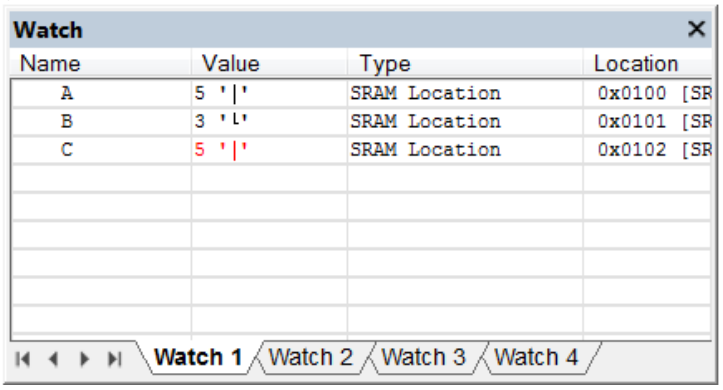

Figure 3: End of Maximum program with variable C containing 0x05 (05_{10})