**Name:**

**AIM:**

**a) Mask the lower nibble of an 8-bit number.**

**b) Mask the higher nibble of an 8-bit number.**

**Theory:**

ANI is a mnemonic, which stands for “ANd Immediate with Accumulator”

This instruction is used to AND 8-bit immediate data with the Accumulator’s content.

|  |  |  |
| --- | --- | --- |
| A | B | A AND B = C |
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

**CODE:**

**Mask the lower nibble of an 8-bit number.**

**LDA 2000H**

**ANI F0H**

**STA 2001H**

**HLT**

**#ORG 2000H**

**#DB 15H**

**Mask the higher nibble of an 8-bit number.**

**LDA 2000H**

**ANI 0FH**

**STA 2001H**

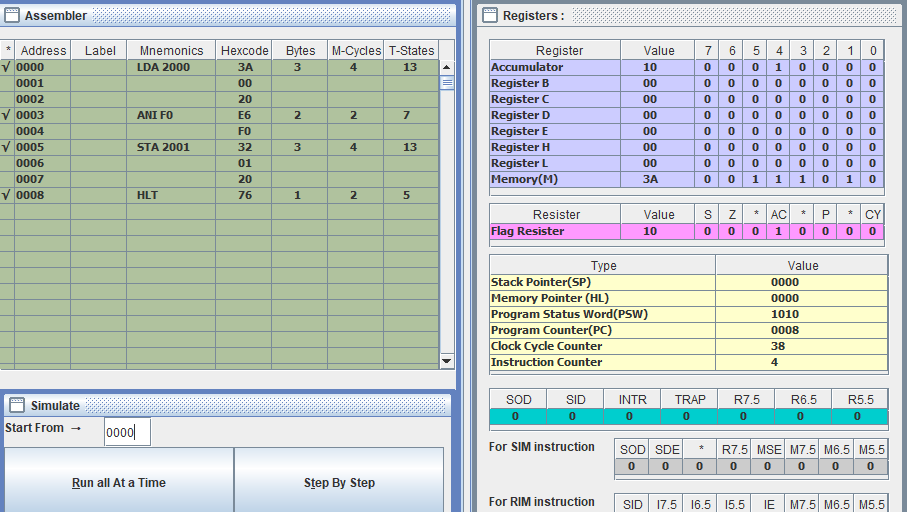
**HLT**

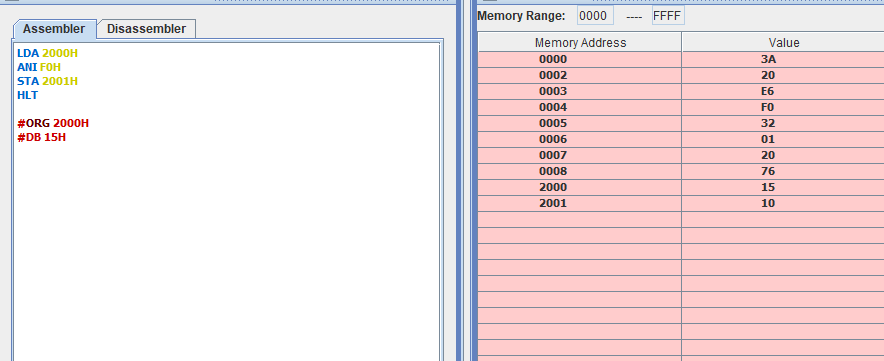
**#ORG 2000H**

**#DB 15H**

**OUTPUT:**

**Mask the lower nibble of an 8-bit number.**

****

****

**Mask the higher nibble of an 8-bit number.**

