Assembly Language – Data Transfers, Addressing, and Arithmetic (2)

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| Group : | Student ID : | Name : |
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4-2 Data Transfer Instructions, Addition and Subtraction

Objective: Understanding the instructions (ADD, SUB, and NEG)

1. Complete the following code to implement this equation:

Rval = -(Val3 - (Val1 - Val2))

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| .data  Val1 SBYTE 03h  Val2 SBYTE 02h  Val3 SBYTE 8fh  Rval SWORD ?  .code  movsx ax, Val1  movsx bx, Val2  movsx cx, Val3  ; Rval = -(Val3 - (Val1 - Val2))   |  |  |  |  |  | | --- | --- | --- | --- | --- | | sub | ax, | bx( 52 ) | ; ax= (Val1 – Val2) | | | sub | cx, ax (27) | | ; cx = Val3 – (Val1 – Val2) | | | mov cx, -cx(29)  neg cx (2) | | | ; cx = -cx | |  | | |  | | | mov | Rval,cx(42) | | ; Rval = cx | | |

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