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ET 386/L

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Lab 2

The Trace method, accumulators, and the program counter were the main focus of this lab. First we were asked to create the following program:

ORG $0100; Originate program at this point in memory

LDAA #$10 ; Load Accumulator A with a value of $10

LDAB #$55 ; Load Accumulator B with a value of $55

ADDA #$55 ; Add $55 to accumulator A

SUBB #$10 ; Subtract $10 from accumulator B

SUBA #$1A ; Subtract $1A from the new value in accumulator A

ADDB #$AB ; Add $AB to the new value in accumulator B

STAA $0120 ; Store contents of accumulator A

STAB $0130 ; Store contents of accumulator B

END

After saving the program, I assembled the program in the command prompt using the ASMCH11. I then ran the program in JBUG11 and traced the program after connecting the Motorola 68HC11 processor. By pressing T, I was able to trace the program step-by-step (line –by-line) until reaching the end of the program. The trace command loads each command into the accumulators.

M68HC11 Absolute Assembler Version 2.70C:/Lab2b.ASC

 1 A 0100 ORG $0100 ;

 2 A 0100 8610 LDAA #$10 ;

 3 A 0102 C655 LDAB #$55 ;

 4 A 0104 8B55 ADDA #$55 ;

 5 A 0106 C010 SUBB #$10 ;

 6 A 0108 801A SUBA #$1A ;

 7 A 010A CBAB ADDB #$AB ;

 8 A 010C B70120 STAA $0120 ;

 9 A 010F F70130 STAB $0130 ;

 10 A END

SYMBOL TABLE: Total Entries= 0

Total errors: 0