

ET 386 L  
Lab 2(Rev 1) Trace Method, Accumulators, Program Counter

1. Create the following program and make your own comments:

```
ORG  $0100 ;
LDAA  #$10 ;
LDAB  #$55 ;
ADDA  #$55 ;
SUBB  #$10 ;
SUBA  #$1A ;
ADDB  #$AB ;
STAA  $0120 ;
STAB  $0130 ;
END
```

2. Name and save the program with the extension \*.asm Use MINI IDE

3. Assemble (Build) the program using MINI IDE

4. Start JBUG11.

5. Once inside JBUG11:

- a. Load your file. (\*.S19)
- b. Trace step by step (T \$0100)

6. Trace the program as follows:

- n. T(enter) T(enter); repeat until the program is completed
- b. Display the contents of memory to observe the program: (L \$0100 \$0140)

7. What seems to be the function of the trace method?

8. What effect does the trace command have on the accumulators?

9. Always use the memory display command (L) to observe machine language and the contents of memory. In this case use:  
L \$0100 \$0140

10. New commands:
- |      |                                 |
|------|---------------------------------|
| LDAB | Load accumulator B              |
| SUBB | Subtract from accumulator B     |
| SUBA | Subtract from accumulator A     |
| ADDB | Add to accumulator B            |
| STAB | Store contents of accumulator B |
| L    | List Memory                     |