Testing Plan

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# Introduction

Tests for the assembler will be conducted by creating assembly language programs, creating the object files by hand that the programs should assemble to, and then comparing these object files to the ones that the assembler has created. Assembly programs will vary in length and complexity up to the given limits (200 source records, 100 symbols, 50 literals), including all supported instructions and pseudo-ops.

# Object File Creation Tests

## Given Example

|  |  |
| --- | --- |
| **Assembly** | **Object File** |
| ; Example Program  Lab2EG .ORIG x30B0  count .FILL #4  Begin LD ACC,count ;R1 <- 4  LEA R0,msg  loop TRAP x22 ;print "hi! "  ADD ACC,ACC,#-1 ;R1--  BRP loop  JMP Next  msg .STRZ "hi! "  Next AND R0,R0,x0 ;R0 <- 0  NOT R0,R0 ;R0 <- xFFFF  ST R0,Array ;M[Array] <- xFFFF  LEA R5,Array  LD R6,=#100 ;R6 <= #100  STR R0,R5,#1 ;M[Array+1] <= xFFFF  TRAP x25  ACC .EQU #1  ; ----- Scratch Space -----  Array .BLKW #3  .FILL x10  .END Begin | HLab2EG30B00018  T30B00004  T30B122B0  T30B2E0B7  T30B3F022  T30B4127F  T30B502B3  T30B640BC  T30B70068  T30B80069  T30B90021  T30BA0020  T30BB0000  T30BC5020  T30BD903F  T30BE30C3  T30BFEAC3  T30C02CC7  T30C17141  T30C2F025  T30C60010  T30C70064  E30B1 |
| **Result:** |  |