

Microprocessor and Computer Architecture (MPCA) Laboratory
UE20CS252 4th Semester,
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Week 6

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1. Write a program in ARM7TDMI-ISA to find the sum of all the digits in an 32bit number.

.TEXT

LDR R0,=A

LDR R1,[R0]

MOV R2,#0

MOV R3,#0

L2: TST R1,#1

BNE L1

LOOP: MOV R1,R1,LSR #1

ADD R2,R2,#1

CMP R2,#32

BNE L2

TST R3,#1

B EXIT

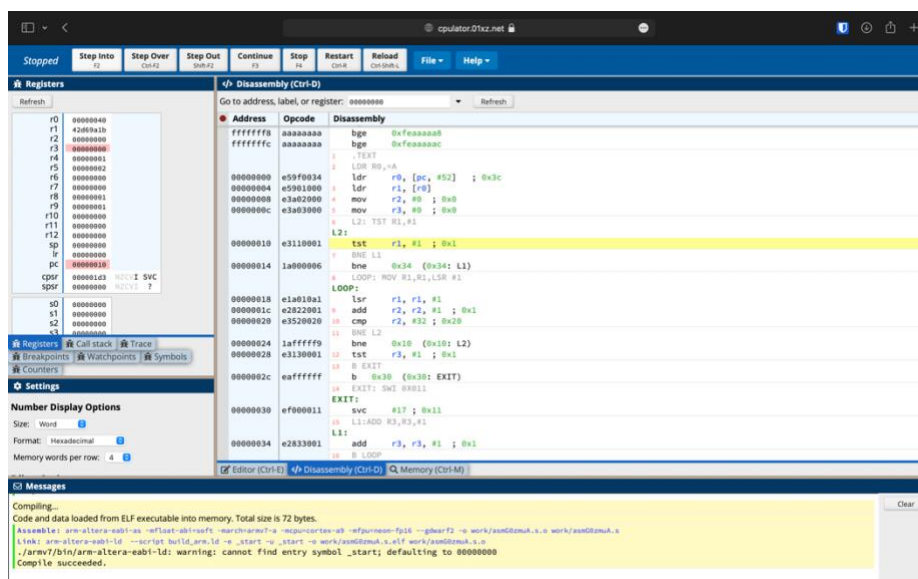
EXIT: SWI 0X011

L1:ADD R3,R3,#1

B LOOP

.DATA

A:.WORD 1121360411



- Expected Output : Display 2 in a register.

