HW 4-1

Due Oct 14 by 3:30pm **Points** 10 **Submitting** a file upload **Available** until Oct 14 at 3:30pm

This assignment was locked Oct 14 at 3:30pm.

driver:

```
/* -- HW4_1.s */
/* This is a comment */
@ Purpose: Stack Problem
@          Provided by Professor B.

        .data

        .text

        .global _start          @ Provide program starting address to linker

_start:
0x00010054 mov     r0, #3
           mov     r4, #4
           mov     r5, #5
           mov     r6, #6
           mov     r7, #7
           mov     r8, #8
           mov     r10, #10
           mov     r11, #11

           bl      _div2

           mov     r0, #0          @ Set program Exit Status code to 0.
           mov     r7, #1          @ Service command code of 1 to terminate pgm.

           svc     0               @ Perform Service Call to Linux.
        .end
```

div2:

```
/* -- Lab?.s */
/* This is a comment */
@ Purpose: Divide value in R0 by 2.

@ R0: Contains the integer to be divided by 2
@ LR: Contains the return address

@ Returned register contents:
@      R0: R0/2
```

```
@ AAPCS v2020Q2 Required registers are preserved.

        .data

        .global _div2           @ Provide program starting address to linker

        .text
_div2:
       @ Preserve AAPCS Required Registers
0x00010084 push    {r4-r8, r10, r11}
           push    {sp}

           mov     r4, #-1
           mov     r5, #16
           mov     r6, #8
           mov     r7, #-2
           mov     r8, #4

           pop     {sp}
           pop     {r4-r8, r10, r11}

           bx      lr
        .end
```

Complete the enclosed spreadsheet stack by hand tracing beginning with the first loc in the driver until the svc 0 call.**sp-1.xlsx**