Daniel Partika 10/5/2021

I pledge my Honor that I have abided by the Stevens Honors System.

1.

```
quest1.s ×
                                                                                                                                                                                                                                            user@box: ~/shared/382/Lab/Lab6
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                                 .extern printf
                        start:
                                         ADR X20, f
                                          ADR X21, i
                                         ADR X22, g
                                         LDUR X24, [X20, #0]
                                         LDUR X25, [X21, #0]
                                         LDUR X26,[X22,#0]
                                          SUB X23, X25, #4
                                         CBNZ X23, ELSE
                                         ADD X24, X26, #1
                                         STUR X24, [X20, #0]
                                         b EXIT
                      ELSE:
                                          SUB X24, X26, #2
                                          STUR X24, [X20, #0]
                      EXIT:
                                         ADR X0, msg
                                          LDUR X1, [X20, #0]
                                         bl printf
                                                                                                                                                                                              user@box:~/shared/382/Lab/Lab6$
                                          svc #0
                                         msg: .ascii "f is %d\n\0"
                        .end
```

2.

```
File Actions Edit View Help
                                                                                                                                                                                                                            8
                                                                                                                                 user@box: ~/shared/382/Lab/Lab6
                       ™ quest2.s ×
                                                                                                      user@box:~/shared/382/Lab/Lab6$
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user@box:~/shared/382/Lab/Lab6$
      .extern printf
 _start:
                                                                                                    user@box:-/shared/382/Lab/Lab6$
            ADR X20, a
            ADR X21, _b
            ADR X22, c
            LDUR X24, [X20, #0]
           LDUR X25,[X21, #0]
            ADD X23, X24, X25
            SUB X23, X23, #14
                                                                                                      user@box:~/shared/382/Lab/Lab6$
user@box:~/shared/382/Lab/Lab6$
user@box:~/shared/382/Lab/Lab6$
user@box:~/shared/382/Lab/Lab6$
            CBNZ X23, ELSE
                                                                                                      user@box:~/shared/382/Lab/Lab6$
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user@box:~/shared/382/Lab/Lab6$
           b EXIT
                                                                                                      user@box:~/shared/382/Lab/Lab6$
user@box:~/shared/382/Lab/Lab6$
user@box:~/shared/382/Lab/Lab6$
           MOV X19, #-2
            STUR X19, [X22,#0]
                                                                                                      user@box:~/shared/382/Lab/Lab6$ aarch64-linux-gnu-as quest1.s -o quest1.o
user@box:~/shared/382/Lab/Lab6$ aarch64-linux-gnu-ld quest1.o -lc
user@box:~/shared/382/Lab/Lab6$ qemu-aarch64 -L /usr/aarch64-linux-gnu/ a.out
EXIT:
           ADR X0, msg
LDUR X1, [X22, #0]
                                                                                                      user@box:~/shared/382/Lab/Lab6$ aarch64-linux-gnu-as quest2.s -o quest2.o
user@box:~/shared/382/Lab/Lab6$ aarch64-linux-gnu-ld quest2.o -lc
user@box:~/shared/382/Lab/Lab6$ qemu-aarch64 -L /usr/aarch64-linux-gnu/ a.out
            bl printf
                                                                                                      user@box:~/shared/382/Lab/Lab6$
            svc #0
            a: .quad 3
            _b: .quad 14
           c: .quad
 .end
```

4.