Bharat Kathi
ECE 154A
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Lab 2 Report

Number of hours spent on lab

I spent about 4 hours on this lab.

mult.s

```
multiply:
    addi s0, a0, 0          #   s0 = a0;
    addi s1, a1, 0          #   s1 = a1;
    addi s2, zero, 8        #   s2 = 8;
    addi s3, zero, 0        #   s3 = 0;

do:                         #   do {
    andi t3, s1, 1          #       t3 = s1[0];
    beq t3, zero, shift     #   if (t3 != 0) {
    add a2, a2, s0          #       a2 = a2 + s0;
shift:                      #   }
    slli s0, s0, 1          #   s0 = s0 << 1;
    srli s1, s1, 1          #   s1 = s1 >> 1;
    addi s3, s3, 1          #       s3 = s3 + 1;
    blt s3, s2, do          #   } while (s3 < 8);
```

div.s

```
divide:
    addi s0, a0, 0          # s0 = a0;
    slli s0, s0, 8          # s0 = s0 << 8;
    addi a3, a1, 0          # a3 = a1;
    addi s8, zero, 9        # s8 = 9;
    addi s9, zero, 0        # s9 = 0;

do:                         # do {
    sub a3, a3, s0          #   a3 = a3 - s0;
    slli a2, a2, 1          #   a2 = a2 << 1;
    bge a3, zero quotient   #   if (a3 < 0) {
```

```
    add a3, a3, s0              #       a3 = a3 + s0;
    j shift
quotient:                       #   }
    blt a3, zero, shift         #   else if (a3 >= 0) {
    addi a2, a2, 1              #       a2 = a2 + 1;
shift:                          #   }
    srli s0, s0, 1             #   s0 = s0 >> 1;
    addi s9, s9, 1             #   s9++;
    blt s9, s8, do            # } while (s9 < 9);
```