Lab 6, post lab quiz:

Pseudo-code

5-bit Booth ← ~5 & 1 only fit in this

```
input [4:0] Multiplier;
input [4:0] Multiplicand;
output reg product[9:0];
  reg state = 0;
  reg [2:0] counter = 0;
  reg [10:0] acc; //accumulator
   reg done = 0;
case (state)
  0 :
     if (~done)
        acc <= [5'b00000, Multiplier]
         counter <= 2'b00
         state <= 1
    if (done)
       done <= 0
        No change in accumulator

1 : if (Multiplier [1:0] == 2'b01) begin
      { Add Multiplicand
      { shift right by 1 for accumulator
        counterec = counter + 1
          state <= 2
```

```
else if (multiplier[1:0] == 2'b10)
    { subtract multiplicand
      shift right acc
      counter <= counter+1
      state <= 2
    }
else
    { state <= 2
    }

2 : if (mdone)
        done <= 1
        state <= 0
        product <= acc
```