

Question 3 (7 points)

Write an assembly code to read an integer from the console, and print it in reverse binary order (consider only the low order 12 bits of the number you read).

For example if you read 6, that is 0000000000000000 000000000000110



Reverse these

You should display

011000000000 submit as Q3.s

Here is the code

```
main: addi $v0, $0, 5
      syscall
      add $t0, $0, $v0      # read an integer into v0
      addi $v0, $0, 1      # put the number you read in t0
      addi $t1, $0, 1      # prepare to write (syscall)
      addi $t2, $0, 13     #t1 = 00 .. 001 (mask to choose the left most bit)
      addi $t3, $0, 1      #maximum number of iteration
loop: beq $t2, $t3, end    # start a counter = 1;
      and $a0, $t0, $t1    # if t2 == t3 stop
      srl $t0, $t0, 1      #choose the bit to display put it in a0
      syscall              # Shift the number you read to the right, so
                          #the next bit will be in position 0
      addi $t3, $t3, 1     #print either 0 or 1
      j loop               #increase the counter by 1
end:  jr $ra
```