CS 240
Laboratory 3 Assignment

The lecture notes on conditional execution should help you with this assignment.

Write a program in MIPS assembly language that implements multiplication of two
numbers using successive addition (do NOT use the MIPS multiplication instruction).
Your program should prompt the user for the two values to multiply, and should print the
result to the console. Assume the inputs are non-negative values.

 Print a hardcopy of your **multiply.asm**, including a screenshot of MARS output showing
the program works, and submit at the beginning of lab.

Here's a template and algorithm to get started:

```
# CS240
# Lab 3 Assignment
#This program prompts the user for 2 values, multiplies them by using successive
addition, and outputs the result to the console

# Data declarations
      .data

# allocate a word  for each of the two values (operands) to be multiplied,  and
for the result
operand1:     .word  0
operand2:     .word  0
result:       .word  0
prompt1:      .asciiz   "Please enter a value: "
prompt2:      .asciiz   "The result is: "

#Program Instructions
      .text
      .globl main
main: # print  string to ask user to enter the first value

      # read in first value and store in $t1 and in memory address operand1

      # print prompt string to ask user to enter the second value

      # read in second value and store in $t2 and in memory address operand2

      # initialize result to be accumulated in $t0 to 0

loop: # if $t1 (which holds the first operand and is used as the loop counter
      # for the repetitive addition) = 0, exit the loop and go to end
      #HINT: use Branch Equal instruction (BEQ) to accomplish this

      # otherwise, add $t2 (which holds the second operand) to $t0 (which holds
      # the result)

      # subtract 1 from counter

      # repeat loop HINT: use Jump instruction (J) to accomplish this

end:  # store result in memory
      # print "The result is: " string
      # print result
      # terminate execution
```