###########################################################

#Extra Credit

#This program will read in a percentage grade and

#print its corresponding letter grade

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.data

header: .asciiz "Please enter a percentage grade: "

answer: .asciiz "That grade corresponds to letter grade: "

gradea: .asciiz "A"

gradeb: .asciiz "B"

gradec: .asciiz "C"

graded: .asciiz "D"

gradef: .asciiz "F"

toobig: .asciiz "Error. The number you entered is above 100."

toosma: .asciiz "Error. The number you entered is below 0."

nwline: .asciiz "\n"

.globl main

.text

main:

li $v0,4 #$v0 = 4 #Set $v0 to 4 to print string

la $a0,header #$a0 = header #Set $a0 to header to be printed

syscall #Execute

li $v0,5 #$v0 = 5 #Set $v0 to read input

syscall

move $t0,$v0 #$t0 = $v0 #Save input into $t0

bgt $t0,100,error1

bgt $t0,89,printA #If $t0 > 89, jump to printA

bgt $t0,79,printB #If $t0 > 79, jump to printB

bgt $t0,69,printC #If $t0 > 69, jump to printC

bgt $t0,59,printD #If $t0 > 59, jump to printD

blt $t0,0,error2 #If $t0 < 0, jump to error2

blt $t0,60,printF #If $t0 < 60, jump to printF

li $v0,10 #Terminate

syscall

error1:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,toobig #$a0 = toobig #Set a0 to print toobig

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,nwline #$a0 = nwline #Set a0 to print nwline

syscall #Execute

b main #Jump back to main

error2:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,toosma #$a0 = toosma #Set a0 to print toosma

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,nwline #$a0 = nwline #Set a0 to print nwline

syscall #Execute

b main #Jump back to main

printA:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,answer #$a0 = answer #Set a0 to print answer

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,gradea #$a0 = gradea #Set a0 to print gradea

syscall #Execute

li $v0,10 #$v0 = 10 #Set v0 to terminate

syscall #Execute

printB:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,answer #$a0 = answer #Set a0 to print answer

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,gradeb #$a0 = gradeb #Set a0 to print gradeb

syscall #Execute

li $v0,10 #$v0 = 10 #Set v0 to terminate

syscall #Execute

printC:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,answer #$a0 = answer #Set a0 to print answer

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,gradec #$a0 = gradec #Set a0 to print gradec

syscall #Execute

li $v0,10 #$v0 = 10 #Set v0 to terminate

syscall #Execute

printD:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,answer #$a0 = answer #Set a0 to print answer

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,graded #$a0 = graded #Set a0 to print graded

syscall #Execute

li $v0,10 #$v0 = 10 #Set v0 to terminate

syscall #Execute

printF:

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,answer #$a0 = answer #Set a0 to print answer

syscall #Execute

li $v0,4 #$v0 = 4 #Set v0 to print string

la $a0,gradef #$a0 = gradef #Set a0 to print gradef

syscall #Execute

li $v0,10 #$v0 = 1-0 #Set v0 to terminate

syscall #Execute