# Drew Daniel

# COSC 300

# Dr. Ezekiel

# Vowel Count

# MIPS code to count vowels

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# Data Section

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.data

given: .asciiz "The Given String is = "

str: .asciiz "Imagine glasses that could bring everything into focus, shifting prescription form near to farsignted and back again in Moments"

ans: .asciiz "\n\nNumber of vowels = "

bye: .asciiz "\n\nHave a nice weekend"

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# Text Section

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

.text

.globl main

main:

la $a0, given

li $v0, 4

syscall

la $a0, str

li $v0, 4

syscall

la $a0, ans

li $v0, 4

syscall

li $s0, 0

la $v0, str

jal VowelCount

move $a0, $v0

li $v0, 1

syscall

la $a0, bye

li $v0, 4

syscall

li $v0, 10

syscall

VowelCount:

addi $sp, $sp, -16

sw $s0, 0($sp)

sw $s1, 4($sp)

sw $a0, 8($sp)

sw $ra, 12($sp)

li $s0, 0

move $s1, $v0

Loop:

lb $a0, 0($s1)

beqz $a0, End

jal VowelTest

add $s0, $s0, $v0

addi $s1, $s1, 1

j Loop

End:

move $v0, $s0

lw $s0, 0($sp)

lw $s1, 4($sp)

lw $a0, 8($sp)

lw $ra, 12($sp)

addi $sp, $sp, 16

jr $ra

VowelTest:

li $v0, 0

beq $a0, 'a', Yes

beq $a0, 'e', Yes

beq $a0, 'i', Yes

beq $a0, 'o', Yes

beq $a0, 'u', Yes

beq $a0, 'A', Yes

beq $a0, 'E', Yes

beq $a0, 'I', Yes

beq $a0, 'O', Yes

beq $a0, 'U', Yes

jr $ra

Yes:

li $v0, 1

jr $ra

