.data

englishword: .asciiz "Alpha ","Bravo ","Charlie ","Delta ","Echo ","Foxtrot ","Golf ","Hotel ","India ","Juliet ","Kilo ","Lima ","Mike ","November ","Oscar ","Papa ","Quebec ","Romeo ","Sierra ","Tango ","Uniform ","Victor ","Whisky ","X-ray ","Yankee ","Zulu "

engap: .word 0,7,14,23,30,36,45,51,58,65,73,79,85,91,101,108,114,122,129,137,144,153,161,169,176,184

number: .asciiz "zero ", "one ", "two ", "three ", "four ", "five ", "six ", "seven ","eight ","nine "

numgap: .word 0,6,11,16,23,29,35,40,47,54

myname: .asciiz "\r\nLindong\r\n"

.text

.globl main

main: li $v0, 12

syscall

sub $t1, $v0, 63 # check whether the input is ?

beqz $t1, exit #if so exit the program

sub $t1, $v0, 48 #48 is the ascii of 0

slt $s0, $t1, $0 # if t1 < 0 then s0 = 1

bnez $s0, none # if not englishword or num jump to none

sub $t2, $t1, 10#input is a number

slt $s1, $t2, $0

bnez $s1, shownum

# Is the input capital word

sub $t2, $v0, 91#make the ascii of A 0

slt $s3, $t2, $0 #if v0<=’z’

sub $t3, $v0, 64

sgt $s4, $t3, $0 #if v0>=’a’

and $s0, $s3, $s4

bnez $s0, showword

# is the input not capital word?

sub $t2, $v0, 123# make the ascii of a 0

slt $s3, $t2, $0 # if v0 <= 'z'

sub $t3,$v0, 96

sgt $s4, $t3, $0 # if v0 >= 'a'

and $s0, $s3, $s4

bnez $s0, showword

j none

shownum: add $t2, $t2, 10

sll $t2, $t2, 2

la $s0, numgap

add $s0, $s0, $t2

lw $s1, ($s0)

#sll $s1, $s1, 1

la $a0, number

add $a0, $a0, $s1

li $v0, 4

syscall #print the number

j main

showword:sub $t3, $t3, 1# print the word

sll $t3, $t3,2

la $s0, engap

add $s0, $s0, $t3

lw $s1, ($s0)

#sll $s1, $s1, 1

la $a0, englishword

add $a0, $s1, $a0

li $v0, 4

syscall

j main

none: and $a0, $0, $0

add $a0, $a0, 42

li $v0, 11

syscall

j main#ready for other input

exit: la $a0, myname

li $v0, 4

syscall

.data

success\_string: .asciiz "\nSuccess! Location: "

fail\_string: .asciiz "\nFail!

buffer: .space 20

.text

.globl main

main:

li $a3,0

li $t0,0

#input string

la $a0,buffer

li $a1,20

li $v0,8

syscall

inputchar:

li $v0,12

syscall

beq $v0,'?',exit #if input ? then exit

move $a2,$v0

search:

beq $t0,$a1,fail #if m equals to length then failure

la $a0,buffer #else load

add $t2,$a0,$t0

lb $s1,($t2)

beq $s1,$a2,success #if$s1 = $a2,then success

add $t0,$t0,1

j search

fail:

add $a3,$zero,1 # failure = 1

add $t0,$zero,$zero # m = 0

la $a0,fail\_string

li $v0,4

syscall

add $a0,$zero,'\n'

li $v0,11

syscall

j inputchar

success:

la $a0,success\_string

li $v0,4

syscall

li $v0,1

add $a0,$t0,1 #print index

syscall

add $a0,$zero,'\n'

li $v0,11

syscall

add $t0,$zero,0 # m= 0

j inputchar

exit:

li $v0,10 #exit

syscall