

EE 2310 Worksheet #6C – Composing a Loop Program

Loop Problem: In the space to the right, write a brief loop program that will search through the ASCII sequence “hello world\n” that has been declared and do the following:

- Capitalize all the letters.
- Put a comma after the “o” in “hello” (leaving the space as well) and an exclamation point after “world.”
- Print out the answer.

Search Routine
.text
main: la \$t0,str
la \$t2,str2
go: lb \$t1,(\$t0)
beq \$t1,0x20,com
beq \$t1,0x0a,excl
sub \$t1,\$t1,0x20
sb \$t1,(\$t2)
addi \$t0,\$t0,1
addi \$t2,\$t2,1
j go
com: sb \$t1,1(\$t2)
li \$t3,0x2c
sb \$t3,(\$t2)
addi \$t2,\$t2,2
addi \$t0,\$t0,1
j go
excl: sb \$t1,1(\$t2)
li \$t3,0x21
sb \$t3,(\$t2)
la \$a0,str2
li \$v0,4
syscall
li \$v0,10
syscall
.data
str: .asciiz “hello world\n”
str2: .space 16