**3.Sa se scrie o procedura care intoarce prin $v0 valorile -1, 0 sau 1, dupa cum numarul x, incarcat**

**ca argument prin stiva, este negativ, 0 sau pozitiv (functia sgn).**

**(ASCLab3.pdf, la sfarsit)**

.data

.text

sgn:

subu $sp, 4 #salvarea lui fp

sw $fp, 0($sp) # $sp:($fp v)(x)

addi $fp, $sp, 4 # $sp:($fpv)$fp:(x)

subu $sp, 4 # $sp:()($fpv)$fp:(x)

sw $s0, 0($sp) # $sp:($s0)($fpv)$fp:(x)

lw $s0, 0($fp) # s0 = x

beqz $s0, is\_zero

bgt $s0, 0, is\_positive

blt $s0, 0, is\_negative

is\_zero:

li $v0, 0

j exit\_sgn

is\_positive:

li $v0, 1

j exit\_sgn

is\_negative:

li $v0, -1

j exit\_sgn

exit\_sgn:

#restaurare s0, fp

sw $s0, -8($fp)

sw $fp, -4($fp)

addu $sp, 8 # elibereaza stiva

jr $ra

main:

li $v0, 5 # read int

syscall

subu $sp, 4 #aloc spatiu in stiva

sw $v0, 0($sp) #salvez x pe stiva

jal sgn

addu $sp, 4 #golim stiva

move $a0, $v0

li $v0, 1

syscall

li $v0, 10

syscall