



DHA Suffa University
Department of Computer Science
Computer Organization & Assembly Language
Spring 2021
Lab # 10 (Filing)

Objective:

To deal with reading and writing in a file using MIPS.

Filing in assembly language:

The sample MIPS program below will open a file for writing, write text to it from a memory buffer, and then close it. Remember you first have to create a text file in an appropriate directory then use it in MIPS program.

Sample Program for writing in the file:

```
.data
filename: .asciiz "D:/hello.txt"
word: .asciiz "\nHey !Hello to all\n"
fileword: .space 1024
.text
```

```
li $v0, 13 # open file
la $a0, filename # loading file name
li $a1, 1 # mode of writing in file
syscall
move $s0, $v0 # file descriptor
```

```
li $v0, 15 # write in file
move $a0, $s0 #file descriptor
la $a1, word # word u want to print
li $a2, 50 # size of word
syscall
```

```
li $v0, 16 # close file
move $a0, $s0 # file descriptor
syscall
```

```
li $v0, 10 # end program
syscall
```

Sample Program for reading from the file:

```
.data
filename: .asciiz "D:/hello.txt"
fileword: .space 1024
.text

li $v0, 13 # open file
la $a0, filename # file name loading
li $a1, 0 # reading file
syscall
move $s0, $v0 # file descriptor

li $v0, 14 # read from file
move $a0, $s0 # file descriptor
la $a1, fileword # buffer holding string of whole file
li $a2, 1024 # size of buffer
syscall

li $v0, 4 # print string in file
la $a0, fileword # load address of buffer
#move $a0, $t6
syscall

li $v0, 16 # close file
move $a0, $s0
syscall

li $v0, 10 # end program
syscall
```

LAB ASSIGNMENT 10

(1) Write the following string in a file and then read it from the file and do the parsing.

Name= Ahmed; department=Computer Science; University=DHA Suffa University.

Program should have following output:

Ahmed

Computer Science

DHA Suffa University

(2) Write a paragraph in .txt file and save it as filename.txt. Now write the MIPS code to read the paragraph from that file and print the number of words present in the paragraph.