

**University of Texas at Dallas--Computer Science Department**  
**CS 5348 Operating Systems Concepts Fall 2018**  
**Project 2, part 1**

Unix V6 file system has a current limitation of 16MB on file size. Redesign the file system to remove this limitation. In particular, you should support files up to 4GB in size. Also, the block size is 1024 Bytes, all fields of Super Block are now doubled and the free[] array is expanded so that the information stored in the super block is closer to 1024 Bytes. (We don't want to waste any part of super block.)

Now, design and develop a program called fsaccess which will allow a Unix user access to the file system of a foreign operating system, the modified Unix Version 6.

Your program will read a series of commands from the user and execute them. You should support the following command:

**(a) initfs will initialize the file system.**

initfs should accept three arguments:

- (1) the name of the (special) file that physically represents the disk,
- (2) number n1 indicating the total number of blocks in the disk (fsize) and
- (3) number n2 representing the total number of i-nodes in the disk.

An example is: initfs /user/venky/disk 8000 300.

The command line is terminated by the user typing a Return.

**(b) q**

Quit the program by saving all the work.

You will add more commands to this program in the next part of this project.

Save all changes and quit.

Some useful Unix system calls are: lseek(), read(), write().

Due date: November 1, 2018 11:55 pm.

Same team; no late work will be accepted.