REPORT 6

In the given assignment we will be implementing a model of ext2 file system.
In order to do so we implemented the following functions.

fs_create= fs_create function is used to create a new file system. In my code , I check whether file name already exists or not in the given directory. If there is already a file with the same filename , then the system throws an error , else it creates a new file.

fs_open= In this section we are updating the file table with current file created and storing it's size , id ,type inside open file table. This function is then called in the create function which returns the value of the file descriptor.

fs_write= In fs_write , I check for the data block which is empty, and write my data from the buffer into the file system. Since each block has just 512 bytes of memory, I had to use three files to store the entire data. In order to traverse through the blocks , I divided my data in three parts. First two parts will will have data each of 512 bytes .The third block will be partially filled with the remaining data from buffer. These parts are sent as parameters for bs_bwrite function. Currently my file checks for flag in read only mode.

fs_read=In fs_read, I have called the blocks designated to the inode of the particular file.This particular block number followed pointer to the buffer array pointing to the start of the block and its length is passed to bs_bread function.

fs_close= In fs_close ,I change the state of the file as zero.

fs_seek= The key function of fs_seek is to change the file pointer to point to the starting of the block from where the data has to be read or written. We are just changing the value of offset and incrementing the value of file pointer with that offset.

From , the above assignment , I have learnt how to work on a given memory block and perform files related functions. I have learnt how allocate a new memory while creating new files, avoid same name file creation conflicts. Assign state to your file to restrict it's operations to read only, write only or both. Also, I have learnt how to keep a record of all the files present in the system and how to manipulate them.

Regarding the entire file system. I have learnt the file system distribution and the importance of superblock and inodes. Thus, overall this assignment helped us acknowledging the importance of a file architecture in any operating system.