Operating Systems Project

File System (FS) – Part 2

Part 2

In this part you have to design **data structures** that you will use in the third part of the project.

In particular, you should do following:

1. Memory Structure(s) used by **your** File System to manage open files
2. Structure(s) on the pseudo-physical memory, which will be used by **your** File System to store files (note that access to the pseudo-physical memory may be performed **only** with the functions implemented in the first part of the project)

For every structure you define, specify following (e.g., in table form for every structure):

- Which fields it has (Name and Meaning)
- Size of the fields
- Reasons why you have chosen these fields (e.g., how they will be used and why)

Required & not required:

- It should be possible to store one or more files in a sector
- File size can be restricted below sector size
- No support for files stretching over multiple sectors

In Part 3 the following functions will be implemented (Part 2 data structures should enable it):

- Open file
- Close file
- Read an arbitrary number of Bytes from file
- Write an arbitrary number of Bytes from file
- Set position in opened file
- Obtain position in open file
- Delete file

UNACCEPTABLE solutions:

- Copy the entire sector in RAM whenever a new byte/word/file is written
- Erase the entire sector whenever a new byte/word/file is written