Project 4

Friday, April 8, 2016 12:04 PM

- To run:
  - Testmount mkdir
  - Need to open two thoth terminals:
    - 1st terminal
      - Test functions
        - IE ls testmount
    - 2nd terminal
      - See if program is working correctly (debugging)
      - ./cs1550 -d testmount
- Functions
  - **_getattr**
    - Test --> ls -al testmount [path]
    - Changes you need to do are written out for you
    - Need to decide if changes are for file, root directory, subdirectory
    - Step 1:
      - sscanf(path, "/%[^/]/%[^.].%s", directory, filename, extension)
        - Path: /abc/f1.txt
        - Directory: abc
        - Filename: f1
        - Extension: txt
    - Step 2:
      - Check if root directory (already done for us)
    - Step 3:
      - Directory name

      1. Fopen(.disk)
      2. Fread(root directory)
      3. Check if present in the root directory
         a) If it is: changes are already given in the commented section
         b) If it is NOT: return -ENOENT
    - Step 4:

- Get starting block
- Step 5:
  - Fseek(starting block)

- **_mkdir**
  - Step 1:
    - Mkdir testmount/abc
  - Step 2:
    - Sscanf --> directory, filename, extension
  - Step 3:
    - ENAMETOOLONG
      - If strlen(directory) > 8
  - Step 4:
    - EPERM:
      - If strlen(filename) > 0
  - Step 5:
    - EEXIST:
      - Fopen(.disk)
      - --> fread(root directory)
  - Step 5 pt2:
    - Check if directory exists or not
      - If exists: return -EEXISTS
      - If not:
        - Bitmap --> last 3 blocks. Find first available block, then add the subdirectory name to dname. Starting block is ***

- **_readdir**
  - Step 1:
    - Test --> ls testmount
  - Step 2:
    - Sscanf
  - Step 3:
    - -ENOENT
      - If directory is not valid
        - Example: can't ls on a file
        - Return -ENOENT
      - If directory is not found in root directory
        - Return -ENOENT

- Main thing: use the filler function
  - Path --> "/" (path is root)
    - Change second parameter: filler(,"all subdirectories",)
    - --> filler(,"dname",)
  - Path --> "/abc/" (path is subdirectory)
    - Paramter: fname + fext
    - Filler(,"above parameter",)