**File System:**

File system is the core component of operation system, which manages and stores file information. In this project, our group will program a file system, and simulate the human-computer interaction process of file management.

The implementation of file system includes managing directory, listing files, creating files, reading files, writing files, deleting files and other functions. We will set a limited size of volume in the beginning, then define the maximum number of file and the file’s maximum size. Users type given commands in the terminal so that the file system can find the files’ location and perform operation on them. The detailed commands are shown below:

|  |  |
| --- | --- |
| **Command** | **Description** |
| help | Show all the commands in file system |
| list | List all the files’ name in the current folder |
| vim | Create a new file in the current folder |
| open\_r | Open a read-only file |
| open\_w | Open the file and write content in the file |
| remove | Delete the file and release the space |
| mkdir | Create new directory and file folder |
| cd .. | Move to the root directory or the absolute directory |

The basic function chart of the file system is shown below:

