

● hw4test1

-- Aim: Mainly show inode information from directoryWalker and inodeWalker, and compare their results.

-- Discription:

1. For directoryWalker, we make the default path as root "/". Firstly, the program get the number of inodes in the file tree into size from directoryWalker. Secondly, we create arrays with size length. This time the directoryWalker will save inum, name and type into our arrays, then we can print them out.
2. For inodeWalker, the way is similar. Firstly, the program get the number of dinodes from dinode block. Then it call inodeWalker again to save inum and type information into test arrays.
3. We duplicate the inum array which is gotten from directoryWalker and arrange it in increasing order. Then we compare it with inum2 from inodeWalker as inum2 is already in increasing order.

● hw4test2

-- Aim: Mainly erase the dirent information from directory on specific path. User can input the filename to erase the corresponding dirent.

-- Discription:

1. Ask user to enter a filename which need erase. In addition, we should change the "\n" to EOF since gets() also read "\n") Then we call erase_directory() to accomplish the erase task and get the corresponding inum. If we erase it successfully, it will print out the inum XX has been deleted. The above action will do in loop until user enter "quit".
2. Print out all the information by using directoryWalker to see whether the erase action really occurs.

● hw4test3

-- Aim: Recovery the information in directory.

-- Discription:

1. Call directroyWalker and inodeWalker to get inum information.
2. Rearrange the inums result form directroyWalker in increading order. Compare these two results and record the unmatched inums in inodeWalker, which means they are lost in directory.
3. If there is unmatched inum, we need recovery. For each unmatched inums, we set a default name "reoveryXX" to pair with it. Then we call recoveryDirectory to link the pair of inum and name to default directory (root).
4. Call directroyWalker again to check whether the information is recovered.

Notice: we can use ls command to check the change in directory.