

# Problem Set 24

CS 311

Due at the beginning of class the following Monday in hardcopy.  
Sections 11.1–3

1. Systems that support sequential file access always have an operation to rewind a file. Do systems that support random file access need this, too?
2. Some operating systems provide a system call `rename()` to give a file a new name. Is there any difference between using this call to rename a file and just copying the file to a new file with the new name, followed by deleting the old file?
3. A simple operating system only supports a single directory, but allows that directory to have arbitrarily many files with arbitrarily long file names. Can something approximating a hierarchical file system be simulated? Explain.