

What do the following do?

```
chmod 600 fileA
chown angrave fileB
chown -R angrave . → recursively change all ugo+r ← everyone can read
chmod o-rwx fileC # Hint: u=user,g=group,o=other
```

How do I find out if an inode is a regular file or directory or something else?

```
stat("mystery", &s)
S_ISDIR(s.st_mode)
MACRO
```

*It stores what it is*

> Symbolic links?

How do they work?

How do I make one?

How do I use readlink?

Why use lstat() instead of stat() ?

> Symbolic vs Hard links Gameshow

advantages?

cross filesystem  
point to files/directories that don't exist  
uses filename, not inode

disadvantages?

slower! (string processing...)  
can link to dirs

Problem: How do I recurse into subdirectories? (+ Fix any errors )

```
void dirlist(char*path) {
    struct dirent* dp;
    DIR* dirp = opendir(path);
    if (dirp == NULL) { perror( ); return; }
    while ((dp = readdir(dirp)) != NULL) {
        if (strcmp(".", dp->d_name) == 0 || strcmp("..", dp->d_name) == 0) { continue; }
        char newpath[strlen(path) + strlen(dp->d_name) + 1];
        sprintf(newpath, "%s/%s", path, dp->d_name);
        printf("%s\n", dp->d_name);
        if (stat(newpath, &s) == 0 && S_ISDIR(s.st_mode)) {
            dirlist(newpath);
        }
    }
}
int main(int argc, char**argv) { dirlist(argv[1]); return 0; }
```

> Why would I want to set a directory's sticky bit?

> How do I set the sticky bit?

> Which directory will have the sticky bit set?

/tmp

Fixes required / Notes:

> What does 'env' do?

All agree that scripts are in

> Why do shell programs start with

#./usr/bin/env python

> How do I make 'hidden' files i.e. not listed by "ls"? How do I list them?

•name

> File permissions and directories

Dirs = r and x

>File system mounts and virtual file systems