

# System File API

## File information: stat and chmod

- The system stores metadata about the file, such as the size of the file, permissions, etc.
- You can access this data by way of the **stat** system function:

```
#include <unistd.h>
#include <sys/stat.h>
int stat(const char *filename, struct stat
        *buf);
int fstat(int fd, struct stat *buf);
        return: 0 if OK, -1 on error
```

- Example: Examining user permissions on a file
  - user-perms.c
- You can set user permissions when you create a file, but you can also change user permissions by using the **chmod** function:

```
#include <sys/stat.h>
int chmod(const char *path, mode_t mode);
int fchmod(int fd, mode_t mode);
```

- Example: Changing user permissions in code
  - change-perms.c
- You can also modify user permissions by using **chmod** directly on the command line.
- Example:  
\$> chmod u+rw some-file