

# Lets C what We learned

Cornell College

10 December 2015

- Nickname is rms
- Free Software Foundation
- GNU project
- GNU Compiler Collection
- Copyleft
- Was in the IEEE committee that wrote the standard that ultimately became known as POSIX

# Free Software Foundation

- The Free Software Foundation (FSF) is a nonprofit with a worldwide mission to promote computer user freedom and to defend the rights of all free software users.
- GNU General Public License
- campaigns for free software adoption and against proprietary software

# GNU General Public License

- GNU
- GPL
- GPL
- Free software license which guarantees end users the freedom to run, study, share, copy, and modify software.
- Copyleft

- `open()`
- `read()`
- `write()`
- Common Flags
- `O_RDONLY` Read Only
- `O_WRONLY` Writable
- `O_CREAT` Create a destination file with file system permission.
- Purpose: To open file for reading or writing or to create a new file.

---

```
/** Creating an input and an output file descriptor **/
```

```
/* Create input file descriptor */
```

```
input_file = open (argv [1], O_RDONLY);
```

```
if (input_fd == -1) {  
    perror ("open");  
    return 2;
```

```
}
```

```
/* Create output file descriptor */
```

```
output_file = open(argv[2], O_WRONLY | O_CREAT, 0644);
```

```
if(output_fd == -1){  
    perror("open");  
    return 3;
```

```
}
```

---

```
/** Copy process **/
```

```
while((ret_in = read (input_file, &buffer, BUF_SIZE))
    > 0){
    ret_out = write (output_file, &buffer,
        (ssize_t) ret_in);
    if(ret_out != ret_in){
        /* Write error */
        perror("write");
        return 4;
    }
}
```

---

```
/** Close file descriptors */
```

```
close (input_file);
close (output_file);
```

---