CSE 333: Systems Programming

Section 3

File I/O

File I/O

- *fopen* to open, *fread* to read, *fseek* to seek, *fwrite* to write
  - These are defined in /usr/include/stdio.h, generally
  - Can look up documentation through “man [function]”, e.g. “man fopen”
- *ferror* returns the last file error, and *perror* can be used to print a meaningful error message
  - Can similarly look in stdio.h for definition or man pages for documentation

File I/O

```
#include <stdio.h>

int main(int argc, char* argv[]) {
  FILE* fp = fopen("not_present.txt", "rb");
  if (fp == NULL) {
    perror("Error opening file");
  } else {
    fclose(fp);
  }
  return 0;
}
```

$ ./error-example
Error opening file: No such file or directory

File I/O

- Is there a standard way in which to handle file-related errors?
- How should we handle and surface file-related errors in…
  - CSE 333 assignments?
  - The “cat” program?
  - A multi-threaded webserver?

Exercise for today

- Make Ascii art!
- Heavy on file I/O
- ~40 lines of code
- “git pull” to get the source code, as usual
- Submit to the DropBox when you are done—one submission per group and *leave a comment with your partner’s name*