Wayne State University

CSC 4421 - Fall 2025
Computer Operating Systems Labs
Lab 2 - Basic I/O

Instructor: Tyler LaFrance

Points Possible: 100

Tasks

Task 1*(50 points)

Implement a program to display a file's contents. It should be similar to the UNIX `cat` command when given a single file. Name your command `show`. It should have the following syntax:

```
$ ./show fileName
```

The above program displays the contents of the file named `fileName`.

Each system call must have error checking, and print an error message if it occurs. You must use open(), read(), write() and close() system calls. 10 points each.

Task 2*(50 points)

Modify the above program to implement a program called `trim` similar to UNIX commands `head` or `tail`. It should print from the mth line to the nth line of the given file. It should have the following syntax:

```
$ ./trim m n source.txt destination.txt
```

The above program trims the contents of the file named `source.txt`, from line m to line n, and writes the results to the file named `destination.txt`.

Each system call must have error checking, and print an error message if it occurs. You must use open(), read(), write(), and close() system calls. 10 points each