COMPUTER SCIENCE AND ENGINEERING
Indian Institute of Technology Palakkad
CS3110: Operating Systems Lab
Lab 10

10-Apr-2025

1. Write program `stat`, which print out file size, number of blocks allocated, and reference count.

2. Write a program that lists files in the given directory. When called without any arguments, the program should just print the file names. When invoked with the `-s` or `-p` flag, the program should print out the size and permissions of each file, respectively.

3. Write a program that prints out the last few lines of a file. The program should be efficient, in that it seeks to near the end of the file, reads in a block of data, and then goes backwards until it finds the requested number of lines; at this point, it should print out those lines from beginning to the end of the file. To invoke the program, one should type: `mytail -n file`, where `n` is the number of lines at the end of the file to print.

4. Write a program `search` that prints out the names of each file and directory in the file system tree, starting the given directory. It should throw an error if invoked with a file. A sample output on a fictitious directory foo is as follows

```
foo
|-a.txt
|-dir1
|  |-b.txt
|  |-c.txt
|-dir2
  |-dir3
    |-d.txt
```