CS232L Operating Systems
Lab 02: Introduction to Bash - Part 2

CS Program
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1 Introduction

The Linux command line follows the Unix Philosophy [1]:

- Write programs that do one thing and do it well.
- Write programs to work together.
- Write programs to handle text streams, because that is a universal interface.

The first principle has resulted in many small programs that excel in doing what they do. These programs are available as binary executable files on your system. Every time you run a command, you are basically running one of these programs. The program will run and do its thing and the output will be displayed on the screen.

2 Resources

This is an introductory lab. We'll be using the following tutorials: Ryan's Linux Tutorials.

Tutorials 1-7 (excluding 6) will be the subject of this lab.

3 Exercises

To complete these questions you will need to create a text file with at least three columns and ten lines. You should name it as your student ID, for example `at05439.txt`. You can have any dummy data you want in that file, however the first column and second columns must have text, and the third column should be integer values. Columns are separated with a `tab`.

See if you can answer the following questions/commands in the command line.

1. Change the permissions of your newly created dummy data file to enable read and write access for the `others` set of people.
2. Show the first three lines of your dummy data file.
3. Show the last four lines of your dummy data file.
4. Show the sixth line of your dummy data file.
5. Display the third column your dummy data file.
6. Display the first column your dummy file in sorted order.
7. Display the maximum value in the third column of your dummy data file.
8. Obtain the number of words in your dummy data file, and store them in another file (name it `count.txt`). Do this in a single command.
9. In `count.txt` append the number of characters in your dummy data file. Do this in a single command.

10. Display the second column of your dummy data file in reverse order (not in alphabetical terms) and store it in another file (name it `reverse.txt`). Use piping to do this in one command.

11. Display the first letter of each text value in the first column of your dummy file. Use piping to do this in one command.

References

[1] Eric Steven Raymond. *The Art of Unix Programming*. 2003. URL: `http://www.catb.org/esr/writings/taoup/html/`.