KWANTLEN POLYTECHNIC UNIVERSITY

INFO 1211 – Fall 2023

Lab 5

Using the `sed` command

Overview

The `sed` command is used for searching patterns in Linux/Unix, and stands for stream editor. It can also perform find and replace, insertion or deletion. This command can be used to address lines or contexts within a file. Substitution is the most important feature of `sed` usage. This allows you to edit files without opening them, which is much faster than opening the files in `vi` editor and then editing texts. The purpose of this lab is to teach you how to process text files using the basic `sed` commands.

Note: To submit this lab, screenshots will be taken and pasted into a Word document. **The font size in your submission will be too small if you maximize the command prompt window to fill the whole desktop.** To take screenshots, minimize the window.

Steps and Procedures

Practice the following exercises. The purpose of these exercises is to familiarize you with some of the most common ways to use the `sed` utility. Take screenshots of each exercise with a (@) after it. Also, take screenshots of your commands as well as the result of the commands.

1. Consider the original IoT file that you created in lab #3, Part 2.5. Use this file to test your `sed` commands in the following. You do not have to alter the original file or create a new file in each case; let `sed` send its output to the screen. Create the following commands using `sed`:
    a. Under line 1 of the file, include your course number and section number. **(@)**
    b. Under line 1 of the file, add a blank line. **(@)**
    c. Find all lines which contain an "**h**" or "**I**", and append a blank line under each such line.
    d. Remove the last two lines**.**" **(@)**
    e. Replace any line that contains a comma (the**,** character) to the line "**Comma found.**"
    f. Insert your name above line 1 of the file. **(@)**
    g. Insert the line "**single quote found.**" above every line containing a single quote.
    h. Replace all the occurrences of the "smart" in the line with "automated ". (@)
    i. From lines 3 to the end of the file, replace every occurrence of "**t**" with "**T**". (@)
    j. Replace every occurrence of "**.**" in the file with "**...**".
    k. Indent by three spaces the last two lines of the text. **(@)**

2. Create a text file named python.txt with the following content:

    Python is one of the most popular programming languages. The Python programming language is easy to learn.
    It's a great first language because Python code is concise and easy to read.
    From web development to machine learning to data science, Python is the language for you.
    The Python programming language runs on a wide range of platforms.

    a. Replace all occurrences of 'Python' in the third line of the file with 'C#'. (@)
    b. Replace the second occurrence of 'Python' in each line of the file with 'C#'. (@)
    c. Replace only the first match of the searching pattern, 'Python 'by the text, 'C# '.(@)

How to Submit Your Lab Report

- Prepare a Word document that contains the screenshots and answers to questions.
- On the cover page you will need to include your name and student number, the course number (INFO 1211), your section number (S10), the lab number (Lab #5) and the submission date for the assignment, centered horizontally.
- Organize your collection of numbered screenshots in order of collection.
- Save your Word document as a PDF file and Upload your report to Moodle

Due Date DATES

November 21/23 at 11 p.m.