

CS100: Software Tools & Technologies Lab I

Lab-2: Practice Problems (Linux Commands)

Date: 21-March-2023

Instructions:

1. You must solve the below problems only on the Linux terminal to make yourself familiar with linux commands and start getting good practice.
2. Try to complete lab problems during the lab hour and submit it through canvas. If you can't complete it within the lab time, you can submit it by the end of today. There will be a penalty if you don't submit on the same day.
3. Prepare all your solution files in a zip file and name it as <ROLLNO.zip> and submit on canvas.

Problems:

1. Find out a way to format the bash **date** command to give the output as given below:
Tue Mar 5 09:58:21 PM IST 2019 [Hint: use man page]
2. Write a single line command using pipes to find the 3 largest files beginning with "a" in the /usr/bin directory.
3. Assume you have a text file with many lines containing user details. Each line has the following format.

Name,Phone number,Email Address,Credit card number,Date of birth. The format of each field is listed below.

Name: Contains First name followed by Last name (with space separated). First and Last names start with capital letters followed by any number of lower letter alphabets.

Phone number: It has 10 digits, in the format as (123) 456-8911 i.e (3 digits)(space)(3 digits)(hyphen)(4 digits).

Email Address: It has the format username@Domain.

The username should start with an alphabet (lower/upper) followed by any number of alphabet or digits. Domain should use <string>.<string>.<string>, where strings contain only lower Alphabets.

Credit Card Number: It has 16 digits in the below format <4 Digits><space><4 Digits><space><4 Digits><space><4 Digits>

Date of the birth: Uses the format DD-MM-YYYY. Where DD should be in the range [1-31] and MM in the range [1-12] and YYYY in the range [0000-9999].

Given the above information, write linux commands for the each following that

- (1) Lists of all user first name and last name whose last name ends with letter 'h'
- (2) Lists of email address of all the users
- (3) Lists of all the user credit cards whose credit cards ending with 1562
- (4) Lists of all users date of births whose year of birth lies in between 1990 and 2000.
4. Write a linux command to compute the disk usage of the current directory in Gigabytes/Megabytes/Kilobytes?
5. Write the command to find all the files which have been modified in the last week. What are the changes required to check for the files which are modified in the last 2 hours? [Hint: explore how to use **find** command]
6. Write a linux command to replace all the spaces with tab space in a file [Hint: Understand **sed** command]

7. Write the command to find all the files which have been modified in the last week. What are the changes required to check for the files which are modified in the last 2 hours? [Hint: explore how to use **find** command]
- 8.