# Working with Commands

# Scenario

As you arrive to work on Monday, your new project manager for the Linux tasking has approached you with your tasks for the week. He has noted that if you can complete the tasks with the provided stipulations for each task by Thursday, he will give you Friday as a paid vacation day.

# Objectives

In this lab, you will:

* Rename all files in the **finance** folder to use spaces in the filenames with only the start of the filename using capitalization
* In the **Company** folder, create a folder structure listing **csv** file.
* Create a log file of all files and folders, including the full path, in the company folder
* In the log file, replace all filenames with “**#**” characters in place of the name

## Exercise 1: Format Filenames

Mondays can be fun to some, but a majority of people in your office really dread it. This has led to some layoffs in the company. Don’t let Mr. X catch you slacking on your tasks for the week. You need to rename all of the files in the **finance** folder to use proper spacing for the filenames.

### TODO

1. Change the **IncomeGeneration.csv** file to **Income Generation.csv**.
2. Change P**rofitAndLossStatements.csv** to **Profit And Loss Statements.csv**.

### Additional Challenge

Use only the **sed** command or do all the changes in one line. (Can use command chaining using the pipe character (**|**).

### Steps

1. Validate that you are in the **/home/YOURUSERNAME/companyA** folder by typing **pwd** and pressing ENTER.

**cd companyA**

1. Change directory into the **HR/Finance** folder by typing

**cd HR/Finance** and pressing ENTER into the terminal.

1. Using the **mv** command, move the file to its new name by typing

**mv IncomeGeneration.csv "Income Generation.csv"**

and pressing ENTER.

1. Do the same to the remaining file by typing

**mv ProfitAndLossStatements.csv "Profit And Loss Statements.csv"**

and pressing ENTER.

[labsuser@centos companyA]$ cd HR/Finance

[labsuser@centos Finance]$ ls

Hourly.csv IncomeGeneration.csv ProfitAndLossStatements.csv Salary.csv

[labsuser@centos Finance]$ mv IncomeGeneration.csv "Income Generation.csv"

[labsuser@centos Finance]$ mv ProfitAndLossStatements.csv "Profit And Loss Statements.csv"

[labsuser@centos Finance]$ ls

Hourly.csv Income Generation.csv Profit And Loss Statements.csv Salary.csv

[labsuser@centos Finance]$

## Exercise 2: Create Folder Listing

After crushing the previous task, Mr. X took notice and decided to step up his requirements for the day off. Create a text file with the **companyA** folder.

### TODO

1. Create a file named **FolderListing.csv** in the **companyA** folder that contains the folder listing of the company with the full path.

Note

This can be all on one line or multiple lines and can be accomplished in multiple ways.

### Steps

1. Validate that you are in the **/home/YOURUSERNAME/companyA** folder by typing **pwd** and pressing ENTER.

**cd /home/labsuser/companyA**

1. Using the program **ls**, list the folders and files recursively and output the data to the file called **FolderListing.csv** by typing

**ls -laR > FolderListing.csv**

and pressing ENTER.

1. Validate your work by typing cat FolderListing.csv and pressing ENTER.

Note

Using the **ls -R** command will recursively output the files and folders only.

[labsuser@centos companyA]$ cat FolderListing.csv

.:

total 28

drwxrwxrwx 1 160641 160641 4096 Aug 24 20:44 .

drwxrwx--- 1 labsuser 48 4096 Aug 24 00:20 ..

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 Documents

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 Employees

-rw-rw-r-- 1 labsuser labsuser 0 Aug 24 20:44 FolderListing.csv

drwxrwxrwx 1 160641 160641 4096 Aug 23 21:39 HR

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 Management

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 SharedFolders

./Documents:

total 8

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 .

drwxrwxrwx 1 160641 160641 4096 Aug 24 20:44 ..

./Employees:

total 8

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 .

drwxrwxrwx 1 160641 160641 4096 Aug 24 20:44 ..

./HR:

total 24

## Exercise 3: Create a Log File

Mr. X is somewhat impressed that you have made it this far, but he has way more for you to do. This folder structure will require auditing at some point, and as such, Mr. X needs you to create a log file in the format of a csv file. It needs to contain all files with the modification time sorted.

### TODO

1. Create a new folder in the top directory called **.CEO**.
2. Create a csv file called **CompanyAudit.csv** in the folder **companyA/.CEO**. The csv must contain the output from the command **ls -laR**.

### Steps

1. Validate that you are in the **/home/YOURUSERNAME/companyA** folder by typing **pwd** and pressing ENTER.

**cd /home/labsuser/companyA**

1. Create a hidden folder using the “.” by typing

**mkdir .CEO** and pressing ENTER.

1. Using the **ls** command and options to recurse into all folders, redirect all data into the file **.CEO/CompanyAudit.csv** by typing

**ls -laR > .CEO/CompanyAudit.csv** and pressing ENTER.

1. Validate your work by typing

**cat .CEO/CompanyAudit.csv** and pressing ENTER.

[labsuser@centos companyA]$ cat .CEO/CompanyAudit.csv

.:

total 36

drwxrwxrwx 1 160641 160641 4096 Aug 24 21:05 .

drwxrwx--- 1 labsuser 48 4096 Aug 24 20:47 ..

drwxrwxr-x 2 labsuser labsuser 4096 Aug 24 21:05 .CEO

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 Documents

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 Employees

-rw-rw-r-- 1 labsuser labsuser 2724 Aug 24 20:44 FolderListing.csv

drwxrwxrwx 1 160641 160641 4096 Aug 23 21:39 HR

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 Management

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 SharedFolders

./.CEO:

total 8

drwxrwxr-x 2 labsuser labsuser 4096 Aug 24 21:05 .

drwxrwxrwx 1 160641 160641 4096 Aug 24 21:05 ..

-rw-rw-r-- 1 labsuser labsuser 0 Aug 24 21:05 CompanyAudit.csv

## Exercise 4: Redact Filenames

Show time, Mr. X is throwing a curveball today. The company needs to share the log file and he needs to change the filenames to protect the innocent. You must change all filenames characters to a “#” and output it to the **SharedFolders** folder in order to provide it to the partners requesting the logs.

### TODO

1. Copy **CompanyAudit.csv** to the **SharedFolders** folder and change the filenames to match the sample output below.

### Sample Output

* **Sample filename**: Hourly.csv
* **Example change**: ######.csv

## Steps

1. Validate that you are in the **/home/labsuser/companyA** folder by typing **pwd** and pressing ENTER.

**cd /home/labsuser/companyA**

1. Using the **copy** program to copy the **CompanyAudit.csv** file, type

**cp .CEO/CompanyAudit.csv SharedFolders/** and press ENTER.

1. Using the stream editor, or **sed** command, change the filenames inside of the CompanyAudit.csv file by typing:

**sed -i 's/.\*\.csv/#####.csv/g' SharedFolders/CompanyAudit.csv**

sed -i 's/.\*\.csv/#####.csv/g' SharedFolders/CompanyAudit.csv

1. Validate your work by typing

**cat SharedFolders/CompanyAudit.csv** and pressing ENTER.

[labsuser@centos companyA]$ cat SharedFolders/CompanyAudit.csv

.:

total 36

drwxrwxrwx 1 160641 160641 4096 Aug 24 21:05 .

drwxrwx--- 1 labsuser 48 4096 Aug 24 20:47 ..

drwxrwxr-x 2 labsuser labsuser 4096 Aug 24 21:05 .CEO

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 Documents

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 Employees

#####.csv

drwxrwxrwx 1 160641 160641 4096 Aug 23 21:39 HR

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:39 Management

drwxrwxrwx 2 160641 160641 4096 Aug 23 21:37 SharedFolders

./.CEO:

total 8

drwxrwxr-x 2 labsuser labsuser 4096 Aug 24 21:05 .

drwxrwxrwx 1 160641 160641 4096 Aug 24 21:05 ..

#####.csv

## STOP

You have successfully completed this lab.