Assignment 2: The command line interface

SSH Access

It is recommended that you follow **Video lecture 2** and connect to your Linux OS running in VM via SSH.

Tip: In addition to using "`ifconfig`" and "`ip address show`" to find the IP address of your Linux server you can also use "`hostname -I`" for obtaining the VM Linux IP address.

Shell identification

When you log on to a Linux computer with a terminal, you will be given access to the shell program if your account has that privilege (the default account has that privilege). It is helpful to know which shell you are running if you want to use any of the shell's non-trivial capabilities. A simple way to identify your shell is to ask the system to show you which processes your current login has running. The command to see process information is:

```
ps
```

When you run that command, it will show you the processes running that are attached to your terminal. You should see 2 output lines, one for the ps command itself, and the other will be the shell you are running (the default for most systems is bash).

Filename globbing

It is very common to work with multiple files in shell commands. We can save ourselves a great deal of typing by using filename globbing (*, ?, and []). Run the following commands to create some files to play with, exactly as they are shown.

```
mkdir lab2
cd lab2
for file in a b c 1 2 3; do
  touch $file
  for file2 in a b c 1 2 3; do
    touch $file$file2
    for file3 in a b c 1 2 3; do
      touch $file$file2$file3
      for file4 in a b c 1 2 3; do
        touch $file$file2$file3$file4
      done
    done
  done
done
```

Use the ls command to see all the files you just created:

```
ls
```

Now try filename globbing to display only the files with just a single character filename, like this:

```
ls ?
```

For the next 3 steps, take a screenshot that shows all 3 commands and their output, name the file Screenshot1.png.

- Create a ls command to only display filenames that start with the letter a and are up to 3 characters long.
- Create a ls command to only display filenames that have only 2 characters in them (not numbers)
- Create a ls command to only display filenames that are 3-digit numbers.

File and folder management

1. Create a directory under your lab2 directory called “dir_abc”
2. **Move** all the files starting with letters a, b, or c into the “dir_abc” folder using mv command
    a. Question 1: What is the command that accomplishes this? (record your answer for submission later)
3. **Copy** all the files starting with any number to a new folder called “numbers”.
    a. Question 2: what is the command that accomplishes this?
4. **Remove** all the files under the lab2 folder that start with “12” using rm command.
    a. Question 3: record the command that accomplishes this.
5. **Remove** the “numbers” directory
    a. If you use the rm command without any switches you may get an error, use the help to figure out what switch you must use to remove the directory and all the files inside.
    b. Question 4: record the command that will remove the “numbers” directory and all its content

Escaping special characters

Create an echo command to show the following output exactly as it is shown:

```
"Hi. How are you?", he said.
```

Take a screenshot of this command and output and save to Screenshot2.png

Command history

How many commands are being kept in your bash history? Research what is the name of the variable that controls this number. Type the command to display this value in your terminal and take Screenshot3.png

Submission of Results

- Refer to the rubrics for marks breakdown.
- Submit the screenshots to Blackboard assignment as attachment.
- Put the answers to the questions in the text comments.