Name:

Red Hat Lab – Chapter 3

BC

Use **Red Hat Lab Environment** to complete the lab. Issue the following commands immediately before step 1:

```
history -c
history -w
```

These commands should be repeated for each user@machine prompt. See boxes below.

Paste a screenshot in the box below of the command output from the command below. Include the command itself in the screenshot:

`lab grade fileS-review`

```
[student@workstation ~]$ lab grade files-review

Grading lab.

 · Checking lab systems ..................................... SUCCESS
 · Checking files in the chapters directory ................. SUCCESS
 · Checking files in the editor directory ................... SUCCESS
 · Checking files in the season1 directory .................. SUCCESS
 · Checking files in the season2 directory .................. SUCCESS
 · Checking that the hard link is correctly created ......... SUCCESS

Overall lab grade: PASS
```

Issue the command `history` after the last step. Paste screenshots of the history for student@serverb in the boxes below (two boxes provided due to number of commands. Include the command itself and the full history of commands.

student@serverb

```
[student@serverb ~]$ history
    1  ls
    2  ls -a
    3  cd
    4  ls
    5  clear
    6  mkdir -p ~/Documents
    7  ls
    8  cd Documents/
    9  mkdir -p project_plans
   10  ls
   11  cd
   12  touch ~/Documents/project_plans/{season1,season2}_project_plan.odf
   13  ls -lR Documents/
   14  pwd
   15  touch tv_season{1..2}_episode{1..6}.ogg
   16  ls tv*
   17  touch mystery_chapter{1..8}.odf
   18  ls mys*
   19  mkdir -p Videos/season{1..2}
   20  ls Videos/
   21  mv tv_season1* Videos/season1
   22  mv tv_season2* Videos/season2
   23  ls -R Videos/
   24  mkdir -p Documents/my_bestseller/chapters
   25  ls -R Documents/
   26  mkdir Documents/my_bestseller/{editor,changes,vacation}
   27  ls -R Documents/
   28  cd Documents/my_bestseller/chapters/
   29  ls
   30  mv ~/mystery_chapter* .
   31  ls
```

```
31  ls
32  mv mystery_chapter{1..2}.odf ../editor
33  ls
34  mv mystery_chapter{7,8}.odf ../vacation
35  ls
36  ls ../vacation/
37  cd ~/Videos/season2
38  cp *episode1.ogg ~/Documents/my_bestseller/vacation/
39  cd ~/Documents/my_bestseller/vacation/
40  ls
41  cd -
42  cp *episode2.ogg ~/Documents/my_bestseller/vacation/
43  cd -
44  ls
45  cd ~/Documents/my_bestseller/
46  cp chapters/mystery_chapter[56].odf changes
47  ls chapters/
48  ls changes/
49  ch changes/
50  ls
51  cd changes
52  cp mystery_chapter5.odf mystery_chapter5_$(date +%F).odf
53  cp mystery_chapter5.odf mystery_chapter5_$(date +%s).odf
54  ls
55  rm mystery*
56  cd ..
57  rm changes
58  rmdir changes/
59  ls
60  rm -r vacation/
61  ls
62  cd
63  mkdir ~/Documents/backups
64  ln ~/Documents/project_plans/season2_project_plan.odf ~/Documents/backups/seasons2_project_plan.odf.back
65  ls -lR ~/Documents/
66  exit
67  ls
68  cd Documents/
69  ls
70  cd
71  ln ~/Documents/project_plans/season2_project_plan.odf ~/Documents/backups/season2_project_plan.odf.back
72  ls -lR ~/Documents/
73  rm ~/Documents/backups/seasons2_project_plan.odf.back
74  ls -lR ~/Documents/
75  exit
76  history
```

Lab Manual

Use the VirtualBox RHELv9 virtual machine for this lab. Do not use the Red Hat Lab Environment. Issue the following commands in the Terminal window before starting the lab on the next page:

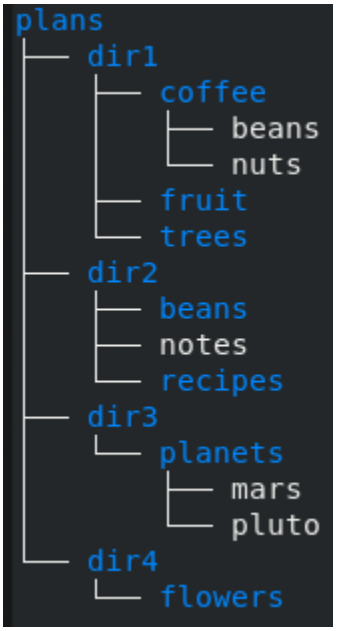
```
history -c
history -w
```

Repeat these commands for root@RHELv8 if necessary.

Paste the results of the history command in the box at the end of the lab.

Lab 03: Absolute & Relative Path Names

Create the directory structure shown within your home directory (/home/student).



Use ONLY **absolute pathnames** and no shortcuts to do the following:

1. Change to student's home directory.
2. Change to the dir2 directory.
3. Display the path to the current directory.
4. Change to the dir4 directory.
5. Return to the student's home directory.
6. Change to the fruit directory.
7. Verify the current working directory.

Use ONLY **relative pathnames** below:

8. Change to the student's home directory.
9. Change to the dir2 directory.
10. Verify what directory the student is currently in.
11. Change to the dir4 directory.
12. Return to the home directory.
13. Change to the fruit directory.
14. Verify the current working directory.
15. Return to the home directory.
16. Change to the plans directory.
17. List the directories and files.

```
student@RHELv8:~$ history
    1  history -w
    2 cd /home/student
    3  cd /home/student/plans/dir2
    5  pwd
    6  cd /home/student/plans/dir4
    7  cd /home/student
    8  cd /home/student/plans/dir1/fruit
    9  pwd
   10  cd (OR cd ~/) (OR cd ../../.. )
   11  cd plans/dir2
   12  pwd
   13  cd ../dir4
   14  cd
   15  cd plans/dir1/fruit
   16  pwd
   17  cd
   18  cd plans/
```

Lab 04: File Manipulation

1. Display a detailed listing of the files in /usr/lib.
2. Display a listing of all the files in /etc/ssh, sorted by file size.
3. Display the same listing, sorted in reverse order.
4. Display a listing of all files and directories in /usr/lib, including subdirectories.
5. Display only the /usr/lib directory and not its contents.
6. Display all the files and directories in /etc starting with the letter l.
7. Display the file type for /etc/hosts.
8. Display the file type of /usr/bin/sudo.
9. Create a new file named testfile.
10. Now update the timestamp for testfile.
11. Set the timestamp for testfile to 06152014.
12. Display the various timestamps associated with testfile.
13. Copy /etc/hosts to student's home directory.
14. Copy /etc/hosts to student's home directory, but rename it to myhosts in the process.
15. Copy the contents of /etc/udev, including subdirectories, to your home directory.
16. Move the testfile from your home directory to the /tmp directory.
17. Move /tmp/testfile back to your home directory while renaming it mytestfile.
18. Delete mytestfile from your home directory.
19. Create a directory called testdir in your home directory.
20. Create the following directories in student's home directory using a command on one line: dir1, dir2, dir3, dir4, dir5.
21. Create a subdirectory called inner inside a subdirectory called outer in student's home directory.
22. Remove testdir.
23. Remove both outer and inner directories in one line.

```
student@RHELv8:/etc$ history
    1  history -w
    2  ls -l /usr/lib
    3  ls -la --sort=size
    4  ls -la --sort=size /etc/ssh
    5  ls -lar --sort=size /etc/ssh
    6  ls -alR /usr/lib
    7  ls -ld /usr/lib
    8  ls -d /usr/lib
    9  cd /etc
   10  ls l*
   11  file /etc/hosts
   12  sudo file/bin/sudo
   13  file /usr/bin/sudo
   14  touch testfile
   15  sudo touch testfile
   16 sudo touch -a testfile
   17 sudo touch -m testfile
   18 sudo touch -c -t 06152014 testfile
```

Lab 05: File Globbing

1. Use globbing to display all files and directories in your home directory that start with the letter D.
2. Use globbing to display all files and directories that have only one character in their filename in /usr/bin.
3. Do the same thing to display all files and directories with two characters in /usr/bin.
4. Display all three-character files and directories that start with w in /usr/bin.
5. Display all files and directories in /usr/bin that start with w and have at least three characters in their file name.
6. Display all the files and directories in /usr/bin that start with a, b, c, or d.
7. Display files and directories in /usr/bin that contain at least two numeric digits.
8. Display files and directories in /usr/bin that do not begin with a through v.

```
tudent@RHELv8:/usr/bin$ history
    1  history -w
    2  ls D*
    3  ls -a D*
    4  ls ? /usr/bin
    5  cd /usr/bin
    6  ls ?
    7  ls ??
    8  ls w??
    9  ls w*
   10  ls [a:d]*
   11  ls [[:digit:]][[:digit:]]
   12  ls [[:digit:]] [[:digit:]]
   13  ls [[:2:]]
   14  ls +([0-9])
   15  ls [[2]]
   16  ls [^a..v]
   17  history
```

Lab 06: Regular Expressions

1. Display occurrences of the pattern root at the beginning of the line in /etc/passwd using the grep command.
2. Use the command that is an alternative to grep -E to repeat step 1 above.
3. Display occurrences of the pattern bash at the end of the line in /etc/passwd.
4. Display any pattern containing r followed by exactly two characters and then the letter t in /etc/passwd using the dot character.
5. Display matches in /etc/passwd that match a single character between the colons that is not a 0,1,2,3,4, or x.
6. Display matches in /etc/passwd to match a colon, followed by zero or more numbers, followed by a colon.
7. Display matches in /etc/passwd to match a colon, followed by one or more numbers, followed by a colon.
8. Display matches to the word aging or ageing in the dictionary file /usr/share/dict/words.
9. Display matches in /etc/passwd for the word root or games.
10. Display all occurrences in /etc/passwd of the letters oo.
11. Replace every occurrence of the word *is* with the word *was* in /etc/wgetrc.
12. Find all occurrences of the * in /etc/rsyslog.conf.
13. Find matches to abid in /usr/share/dict/words for upper and lower case both.
14. Display all lines that do not contain local in /etc/hosts.
15. Match the word test in all files starting with an m in the /etc directory.
16. Display only the file names instead of every matching line when matching the word test in all files starting with an m in the /etc directory.
17. Display the matching file names for all matches in the /etc directory structure that match delegateSystem.

```
student@RHELv8:~$ history
    1  history -w
    2  grep ^root /etc/passwd
    3  grep -r 'root' /etc/passwd
    4  grep -G ^root /etc/passwd
    5  grep -n root /etc/passwd
    6  grep bash$ /etc/passwd
    7  grep -e "r??t" /etc/passwd
    8  grep r??t /etc/passwd
    9  ls r??t /etc/passwd
   10  grep -e "r..t" /etc/passwd
   11  grep --exclude '[[0..4]]|x'
   12  grep --exclude :0..4: --exclude x /etc/passwd
   13  grep "[[:digit:]]" /etc/passwd
   14  grep -e aging -e ageing /usr/share/dict/words
   15  grep -o -e aging -e ageing /usr/share/dict/words
   16  grep -o -e root -e games /etc/passwd
   17  grep oo /etc/passwd
   18  grep -o oo /etc/passwd
   19  grep -rl is /etc/wgetrc | xargs sed -i 's/is/was/g'
```