



**Ganpat
University**

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Batch:61

-----PRACTICAL 14-----

» **Question 1 : Ensure that whenever a new user is created in the system, they will be having the a folder name “welcome” created by default in the home directory.**

```

Red Hat
Activities Terminal Apr 15 12:28 tushar@workstation:~
File Edit View Search Terminal Help
[root@workstation ~]# su -
Last login: Mon Apr 15 12:24:48 EDT 2024 on pts/0
[root@workstation ~]# sudo mkdir /etc/skel/welcome

[root@workstation ~]#
[root@workstation ~]# useradd tushar ; passwd tushar
Changing password for user tushar.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@workstation ~]#
[root@workstation ~]# su tushar

(process:2780): dconf-WARNING **: 12:28:06.020: failed to commit changes to dconf: Error spawning command line "dbus-launch --autolaunch=84d393ff08f147b0a44b9a69c37b6abf --binary-syntax --close-stderr": Child process exited with code 1
[tushar@workstation root]$ cd
[tushar@workstation ~]$ ls
welcome
[tushar@workstation ~]$
  
```

Commands :

su -

mkdir /etc/skel/welcome

useradd tushar ; passwd tushar

su tushar

cd

ls

explanation of each command:

1. **su -:**

- This command stands for "switch user" and the hyphen (-) option indicates that the environment variables of the new user should be loaded. When you execute **su -**, you switch to the root user and load its environment.

2. **mkdir /etc/skel/welcome:**

- This command creates a new directory named "welcome" inside the **/etc/skel** directory. The **/etc/skel** directory is typically used to store default user profile settings and files that are copied to a new user's home directory when the user account is created.

3. **useradd tushar ; passwd tushar:**

- These are actually two commands separated by a semicolon.
 - **useradd tushar:** This command adds a new user named "tushar" to the system.
 - **passwd tushar:** This command sets a password for the newly created user "tushar".

4. **su tushar:**

- This command switches the user to "tushar". After executing this command, you will be prompted to enter the password for the user "tushar".

5. **cd:**

- This command stands for "change directory" and when used without any arguments, it takes you to the user's home directory.

6. **ls:**

- This command lists the contents of the current directory. When executed after **cd**, it will list the contents of the user's home directory.

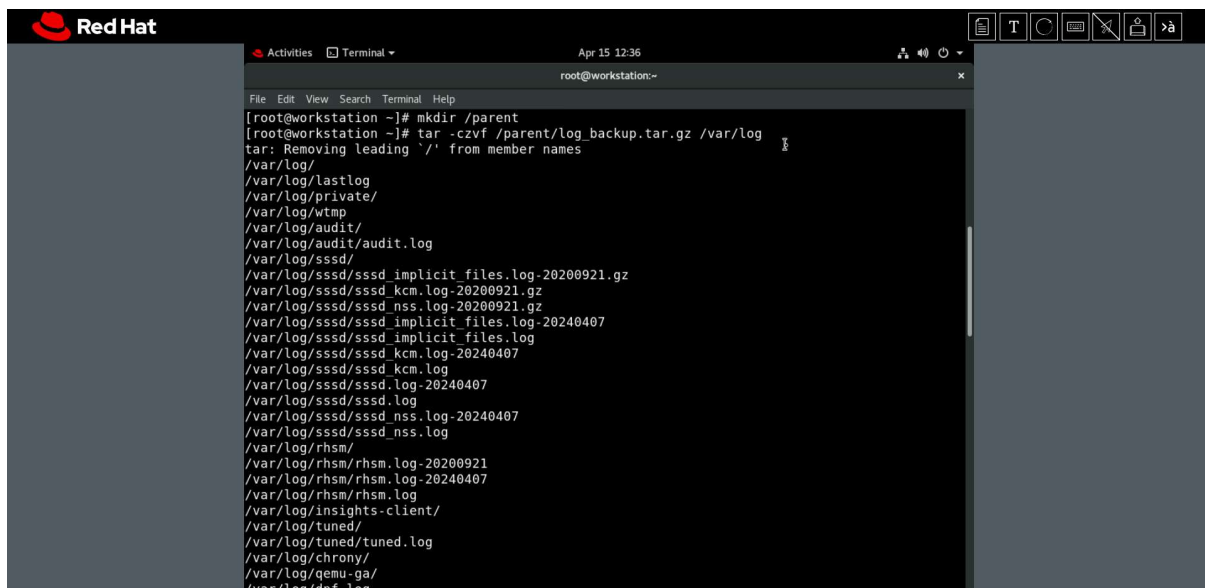
» Question 2 : Create an Archive- Create an archive file in /parent/

- It contains backup of /var/log.

- verify the same

-extract the same file

-create three different files and zip and unzip it.



```

Red Hat
Activities Terminal Apr 15 12:36 root@workstation:~
File Edit View Search Terminal Help
[root@workstation ~]# mkdir /parent
[root@workstation ~]# tar -czvf /parent/log_backup.tar.gz /var/log
tar: Removing leading '/' from member names
/var/log/
/var/log/lastlog
/var/log/private/
/var/log/wtmp
/var/log/audit/
/var/log/audit/audit.log
/var/log/sss/
/var/log/sss/sss_implicit_files.log-20200921.gz
/var/log/sss/sss_kcm.log-20200921.gz
/var/log/sss/sss_nss.log-20200921.gz
/var/log/sss/sss_implicit_files.log-20240407
/var/log/sss/sss_implicit_files.log
/var/log/sss/sss_kcm.log-20240407
/var/log/sss/sss_kcm.log
/var/log/sss/sss.log-20240407
/var/log/sss/sss.log
/var/log/sss/sss_nss.log-20240407
/var/log/sss/sss_nss.log
/var/log/rhsm/
/var/log/rhsm/rhsm.log-20200921
/var/log/rhsm/rhsm.log-20240407
/var/log/rhsm/rhsm.log
/var/log/insights-client/
/var/log/tuned/
/var/log/tuned/tuned.log
/var/log/chrony/
/var/log/qemu-ga/
/var/log/dnf.log
  
```

Commands :

mkdir /parent

tar -czvf /parent/log_backup.tar.gz /var/log

explanation of each command:

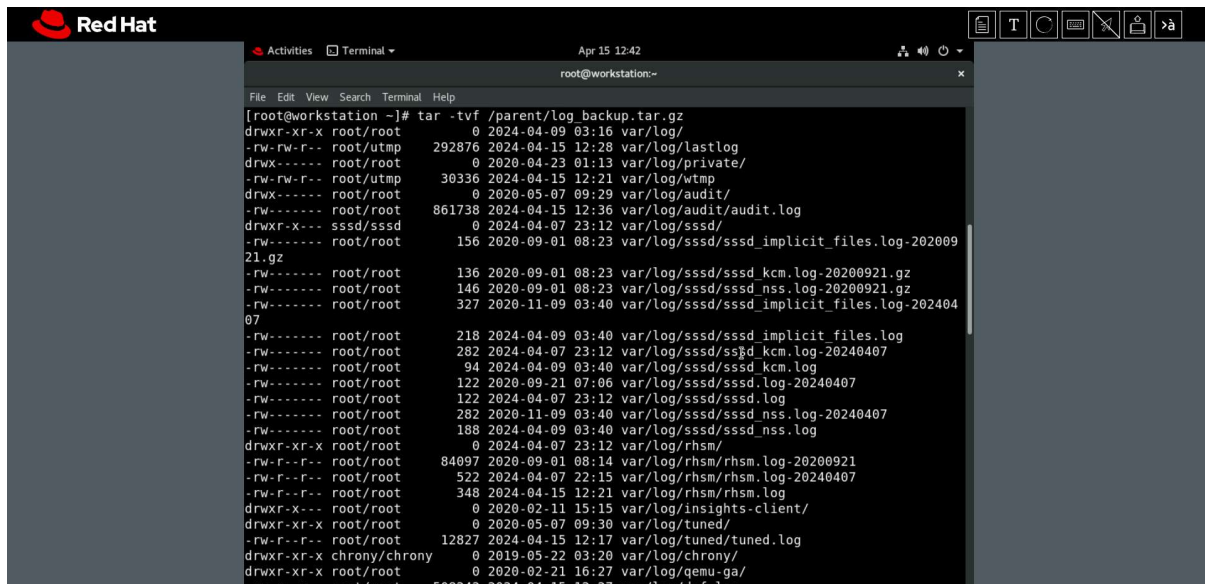
1. **mkdir /parent:**

- This command creates a new directory named "parent" in the root directory ("/"). The **-p** option isn't used here, so if the parent directories don't exist, it will throw an error.

2. **tar -czvf /parent/log_backup.tar.gz /var/log:**

- **tar:** This is the command-line utility for tape archiving, but it's often used to manipulate archive files.
- **-czvf:** These are options used with the **tar** command:

- **-c**: Create a new archive.
- **-z**: Compress the archive using gzip.
- **-v**: Verbose mode, which outputs the progress of the operation.
- **-f**: Specifies the filename of the archive.
- **/parent/log_backup.tar.gz**: This is the filename and path of the archive file to be created. It will be located in the "/parent" directory and named "log_backup.tar.gz".
- **/var/log**: This is the directory or files you want to include in the archive. In this case, it's the "/var/log" directory, which typically contains system log files.



```

[root@workstation ~]# tar -tvf /parent/log_backup.tar.gz
drwxr-xr-x root/root          0 2024-04-09 03:16 var/log/
-rw-rw-r-- root/utmp    292876 2024-04-15 12:28 var/log/lastlog
drwx----- root/root          0 2020-04-23 01:13 var/log/private/
-rw-rw-r-- root/utmp    30336 2024-04-15 12:21 var/log/wtmp
drwx----- root/root          0 2020-05-07 09:29 var/log/audit/
-rw-rw-r-- root/root    861738 2024-04-15 12:36 var/log/audit/audit.log
drwxr-x-- sssd/sss      0 2024-04-07 23:12 var/log/sss/
-rw----- root/root    156 2020-09-01 08:23 var/log/sss/sss_implicit_files.log-202009
21.gz
-rw----- root/root    136 2020-09-01 08:23 var/log/sss/sss_kcm.log-20200921.gz
-rw----- root/root    146 2020-09-01 08:23 var/log/sss/sss_nss.log-20200921.gz
-rw----- root/root    327 2020-11-09 03:40 var/log/sss/sss_implicit_files.log-202404
07
-rw----- root/root    218 2024-04-09 03:40 var/log/sss/sss_implicit_files.log
-rw----- root/root    282 2024-04-07 23:12 var/log/sss/sss_kcm.log-20240407
-rw----- root/root    94 2024-04-09 03:40 var/log/sss/sss_kcm.log
-rw----- root/root    122 2020-09-21 07:06 var/log/sss/sss.log-20240407
-rw----- root/root    122 2024-04-07 23:12 var/log/sss/sss.log
-rw----- root/root    282 2020-11-09 03:40 var/log/sss/sss_nss.log-20240407
-rw----- root/root    188 2024-04-09 03:40 var/log/sss/sss_nss.log
drwxr-xr-x root/root          0 2024-04-07 23:12 var/log/rhsm/
-rw-r--r-- root/root    84097 2020-09-01 08:14 var/log/rhsm/rhsm.log-20200921
-rw-r--r-- root/root    522 2024-04-07 22:15 var/log/rhsm/rhsm.log-20240407
-rw-r--r-- root/root    348 2024-04-15 12:21 var/log/rhsm/rhsm.log
drwxr-x-- root/root          0 2020-02-11 15:15 var/log/insights-client/
drwxr-xr-x root/root          0 2020-05-07 09:30 var/log/tuned/
-rw-r--r-- root/root    12827 2024-04-15 12:17 var/log/tuned/tuned.log
drwxr-xr-x chrony/chrony      0 2019-05-22 03:20 var/log/chrony/
drwxr-xr-x root/root          0 2020-02-21 16:27 var/log/qemu-ga/
-rw-r--r-- root/root    508242 2024-04-15 12:22 var/log/dnf.log

```

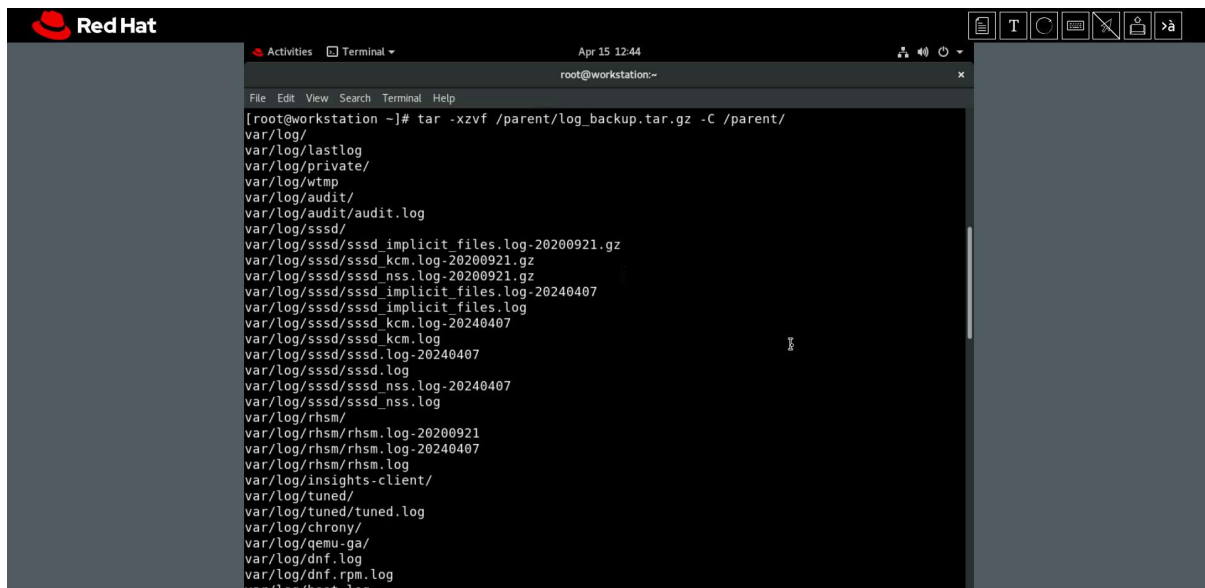
Command:

tar -tvf /parent/log_backup.tar.gz

explanation of each command:

- **tar**: The command-line utility for tape archiving, often used to manipulate archive files.
- **-t**: Specifies that tar should list the contents of an archive.
- **-v**: Stands for "verbose", it outputs additional information about the operation, such as filenames as they are processed.
- **-f**: Specifies the filename of the archive to operate on.

- **/parent/log_backup.tar.gz**: This is the filename and path of the archive file to list the contents of. It's located in the "/parent" directory and named "log_backup.tar.gz".



The screenshot shows a terminal window titled "Red Hat" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Apr 15 12:44, root@workstation:~). The terminal displays the command `[root@workstation ~]# tar -xzvf /parent/log_backup.tar.gz -C /parent/` and its output, which lists the contents of the archive. The output shows a directory structure starting with `var/log/` and includes various log files and directories such as `var/log/lastlog`, `var/log/private/`, `var/log/wtmp`, `var/log/audit/`, `var/log/audit/audit.log`, `var/log/sss/`, `var/log/sss/sss_implicit_files.log-20200921.gz`, `var/log/sss/sss_kcm.log-20200921.gz`, `var/log/sss/sss_nss.log-20200921.gz`, `var/log/sss/sss_implicit_files.log-20240407`, `var/log/sss/sss_implicit_files.log`, `var/log/sss/sss_kcm.log-20240407`, `var/log/sss/sss_kcm.log`, `var/log/sss/sss.log-20240407`, `var/log/sss/sss.log`, `var/log/sss/sss_nss.log-20240407`, `var/log/sss/sss_nss.log`, `var/log/rhsm/`, `var/log/rhsm/rhsm.log-20200921`, `var/log/rhsm/rhsm.log-20240407`, `var/log/rhsm/rhsm.log`, `var/log/insights-client/`, `var/log/tuned/`, `var/log/tuned/tuned.log`, `var/log/chrony/`, `var/log/qemu-ga/`, `var/log/dnf.log`, and `var/log/dnf.rpm.log`.

Command :

`tar -xzvf /parent/log_backup.tar.gz -C /parent/`

explanation of each command:

- **tar**: The command-line utility for tape archiving, often used to manipulate archive files.
- **-x**: Stands for "extract", it tells tar to extract files from the archive.
- **-z**: Specifies that the archive is compressed using gzip.
- **-v**: Stands for "verbose", it outputs additional information about the operation, such as filenames as they are extracted.
- **-f**: Specifies the filename of the archive to operate on.
- **/parent/log_backup.tar.gz**: This is the filename and path of the archive file to extract files from. It's located in the "/parent" directory and named "log_backup.tar.gz".
- **-C /parent/**: Changes the directory to /parent/ before performing the extraction. This option is used to specify the target directory for extraction.

```

[root@workstation ~]# ls /parent
log_backup.tar.gz  var
[root@workstation ~]# ls /parent/var/log
anaconda          cron-20240407      insights-client    secure
audit             cups               lastlog           secure-20200921
boot.log          dnf.librepo.log   lastlog           secure-20240407
boot.log-20200921 dnf.librepo.log-20200921 maillog           speech-dispatcher
boot.log-20240407 dnf.librepo.log-20240407 maillog-20200921 spooler
boot.log-20240409 dnf.log            maillog-20240407 spooler-20200921
btmtp             dnf.rpm.log       messages          spooler-20240407
btmtp-20240407    firewallld        messages-20200921 sssd
chrony            gdm               messages-20240407 swtpm
cloud-init.log    glusterfs         private           tuned
cloud-init-output.log hawkey.log        qemu-ga           wtmp
cron              hawkey.log-20200921 rhsm
cron-20200921     hawkey.log-20240407 samba
[root@workstation ~]#

```

Commands :

ls /parent

ls /parent/var/log

explanation of each command:

1. **ls /parent:**
 - This command lists the contents of the "/parent" directory.
2. **ls /parent/var/log:**
 - This command lists the contents of the "/parent/var/log" directory.

```

[root@workstation ~]# touch /parent/file1 /parent/file2 /parent/file3
[root@workstation ~]# tar -cvf /parent/files.tar /parent/file1 /parent/file2 /parent/file3
tar: Removing leading '/' from member names
/parent/file1
tar: Removing leading '/' from hard link targets
/parent/file2
/parent/file3
[root@workstation ~]# tar -tvf /parent/files.tar
-rw-r--r-- root/root      0 2024-04-15 12:49 parent/file1
-rw-r--r-- root/root      0 2024-04-15 12:49 parent/file2
-rw-r--r-- root/root      0 2024-04-15 12:49 parent/file3
[root@workstation ~]# tar -xvf /parent/files.tar /parent
tar: /parent: Not found in archive
tar: Exiting with failure status due to previous errors
[root@workstation ~]# tar -xvf /parent/files.tar -C /parent
parent/file1
parent/file2
parent/file3
[root@workstation ~]#

```

Commands :

touch /parent/file1 /parent/file2 /parent/file3

tar -cvf /parent/files.tar /parent/file1 /parent/file2 /parent/file3

tar -tvf /parent/files.tar

tar -xvf /parent/files.tar -C /parent

explanation of each command:

1. **touch /parent/file1 /parent/file2 /parent/file3:**

- This command creates three empty files named "file1", "file2", and "file3" within the "/parent" directory.

2. **tar -cvf /parent/files.tar /parent/file1 /parent/file2 /parent/file3:**

- **tar:** The command-line utility for tape archiving.
- **-c:** Stands for "create", it tells tar to create a new archive.
- **-v:** Stands for "verbose", it outputs additional information about the operation.
- **-f:** Specifies the filename of the archive to create.
- **/parent/files.tar:** This is the filename and path of the archive file to create. It's located in the "/parent" directory and named "files.tar".
- **/parent/file1 /parent/file2 /parent/file3:** These are the files to be included in the archive.

3. **tar -tvf /parent/files.tar:**

- **-t:** Specifies that tar should list the contents of an archive.
- **-v:** Stands for "verbose", it outputs additional information about the operation.
- **-f:** Specifies the filename of the archive to operate on.
- **/parent/files.tar:** This is the filename and path of the archive file to list the contents of.

4. **tar -xvf /parent/files.tar -C /parent:**

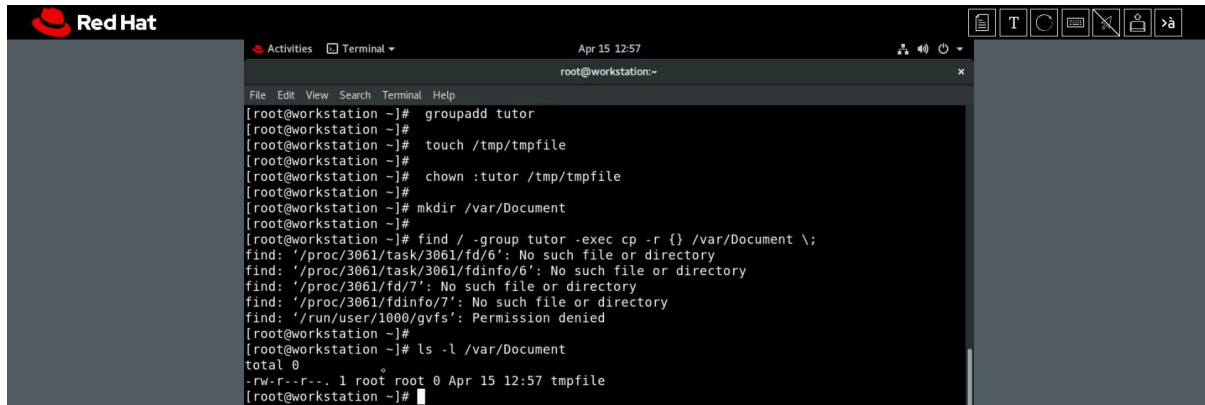
- **-x:** Stands for "extract", it tells tar to extract files from the archive.
- **-v:** Stands for "verbose", it outputs additional information about the operation.
- **-f:** Specifies the filename of the archive to operate on.
- **/parent/files.tar:** This is the filename and path of the archive file to extract files from.

- **-C /parent:** Changes the directory to "/parent" before performing the extraction.

» Question 3 : Find all files & directories that is owned by group tutor.

- Copy all files & directories to /var/Document folder.

- verify the same.



```

Red Hat
Activities Terminal Apr 15 12:57 root@workstation:~
File Edit View Search Terminal Help
[root@workstation ~]# groupadd tutor
[root@workstation ~]# touch /tmp/tmpfile
[root@workstation ~]# chown :tutor /tmp/tmpfile
[root@workstation ~]# mkdir /var/Document
[root@workstation ~]# find / -group tutor -exec cp -r {} /var/Document \;
find: '/proc/3061/task/3061/fd/6': No such file or directory
find: '/proc/3061/task/3061/fdinfo/6': No such file or directory
find: '/proc/3061/fd/7': No such file or directory
find: '/proc/3061/fdinfo/7': No such file or directory
find: '/run/user/1000/gvfs': Permission denied
[root@workstation ~]# ls -l /var/Document
total 0
-rw-r--r-- 1 root root 0 Apr 15 12:57 tmpfile
[root@workstation ~]#

```

Commands :

groupadd tutor

touch /tmp/tmpfile

chown :tutor /tmp/tmpfile

mkdir /var/Document

find / -group tutor -exec cp -r {} /var/Document \;

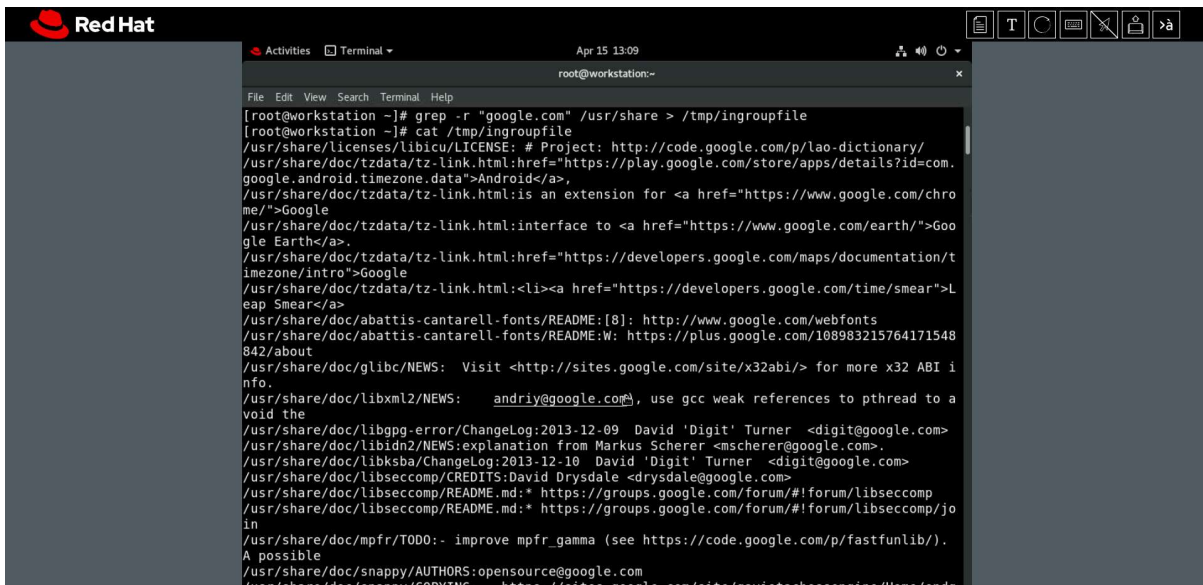
ls -l /var/Document

explanation of each command:

1. **groupadd tutor:** Creates a new group named "tutor".
2. **touch /tmp/tmpfile:** Creates an empty file named "tmpfile" in the "/tmp" directory.
3. **chown :tutor /tmp/tmpfile:** Changes the group ownership of the file "/tmp/tmpfile" to the group "tutor".
4. **mkdir /var/Document:** Creates a new directory named "Document" in the "/var" directory.

5. **find / -group tutor -exec cp -r {} /var/Document ;:** Searches the entire filesystem ("/") for files and directories owned by the group "tutor" and copies them recursively to the "/var/Document" directory.
6. **ls -l /var/Document:** Lists the contents of the "/var/Document" directory, showing detailed information including ownership and permissions.

» **Question 4 : Search a string in from the file /usr/share/-
Store output to a file /tmp/ingroupfile.**



```

[root@workstation ~]# grep -r "google.com" /usr/share > /tmp/ingroupfile
[root@workstation ~]# cat /tmp/ingroupfile
/usr/share/licenses/libicu/LICENSE: # Project: http://code.google.com/p/lao-dictionary/
/usr/share/doc/tzdata/tz-link.html: href="https://play.google.com/store/apps/details?id=com.google.android.timezone.data">Android</a>,
/usr/share/doc/tzdata/tz-link.html: is an extension for <a href="https://www.google.com/chrome/">Google
/usr/share/doc/tzdata/tz-link.html: interface to <a href="https://www.google.com/earth/">Google Earth</a>.
/usr/share/doc/tzdata/tz-link.html: href="https://developers.google.com/maps/documentation/timezone/intro">Google
/usr/share/doc/tzdata/tz-link.html: <li><a href="https://developers.google.com/time/smeat">Leap Smear</a>
/usr/share/doc/abattis-cantarell-fonts/README:[8]: http://www.google.com/webfonts
/usr/share/doc/abattis-cantarell-fonts/README:W: https://plus.google.com/108983215764171548842/about
/usr/share/doc/glibc/NEWS: Visit <http://sites.google.com/site/x32abi/> for more x32 ABI info.
/usr/share/doc/libxml2/NEWS: andriy@google.com), use gcc weak references to pthread to avoid the
/usr/share/doc/libgpg-error/ChangeLog:2013-12-09 David 'Digit' Turner <digit@google.com>
/usr/share/doc/libidn2/NEWS: explanation from Markus Scherer <mscherer@google.com>.
/usr/share/doc/libksba/ChangeLog:2013-12-10 David 'Digit' Turner <digit@google.com>
/usr/share/doc/libseccomp/CREDITS: David Drysdale <drysdale@google.com>
/usr/share/doc/libseccomp/README.md:* https://groups.google.com/forum/#!forum/libseccomp
/usr/share/doc/libseccomp/README.md:* https://groups.google.com/forum/#!forum/libseccomp/join
/usr/share/doc/mpfr/TODD: - improve mpfr_gamma (see https://code.google.com/p/fastfunlib/). A possible
/usr/share/doc/snappy/AUTHORS: opensource@google.com
/usr/share/doc/snappy/COPYING: https://sites.google.com/site/gaviothassenenne/Home/endor
  
```

Commands :

grep -r "google.com" /usr/share > /tmp/ingroupfile

cat /tmp/ingroupfile

explanation of each command:

1. **grep -r "google.com" /usr/share > /tmp/ingroupfile:**
 - This command searches recursively (**-r**) for the string "google.com" within all files under the directory **/usr/share** and redirects (**>**) the output to the file **/tmp/ingroupfile**.
2. **cat /tmp/ingroupfile:**
 - This command prints the contents of the file **/tmp/ingroupfile** to the terminal.