1. Create a directory "exercise" inside your home directory and create nested(dir1/dir2/dir3) directory structure inside "excerise" with single command.

Answer.

**$sudo mkdir -p exercise/dir1/dir2/dir3**

1. Create two empty files inside dir2 directory: emptyFile1,emptyFile2 in single command

Answer.

**$touch emptyFile{1,2}**

1. Create one file file1.txt containing text "hello world" and save it.

Answer.

**$echo “hello world” > file1**

1. Find a "passwd" file using find command inside /etc. copy this files as passwd\_copy and then rename this file as passwd\_backup.

Answer.

**$find ./etc -name passwd**

**$cd /./etc**

**$cp ./etc/passwd ./etc/passwd\_copy**

**$mv ./etc/passwd\_copy passwd\_backup**

1. Try reading passwd\_backup file in multiple tools: less,more,cat,strings etc and find the difference in their usage.

Answer.

**$cat passwd\_backup(**displays the contents of the passwd\_backup on to the output terminal.**)**

**$more passwd\_backup** (displays the contents of the file one screen at a time for large files.)

**$less passwd\_backup** (similiar to more but have more features, you can move around file , search option )

**$strings passwd\_backup** (extracts string characters from binary file/ executable file etc)

1. Find out the number of line in password\_backup containing "/bin/false".

Answer.

**$grep -c ‘/bin/false’ passwd\_backup**

1. Get the first 5 lines of a file “password\_backup” and Redirect the output of the above commands into file "output".

Answer.

**$head -5 passwd\_backup > output**

1. Create a "test" user,create its password and find out its uid and gid.

Answer.

**$sudo useradd test**

**$sudo passwd test**

**$Id test OR (id -u test , id -gn test)**

1. Change the timestamp of emptyFile1,emptyFile2 which are exist in dir2

Answer.

**$touch -a emptyFile1**

**$touch -a emptyFile2**

**$touch -m emptyFile1**

**touch -m emptyFile2**

**$stat emptyFile1**

**$stat emptyFile2**

1. Login as test user and edit the "output" file created above. Since the permission wont allow you to save the changes. Configure such that test user can edit it.
   1. Add group owner of the "output" file as the secondary group of testuser and check/change the "output" file permission if it is editable by group. Once done revert the changes
   2. Make the file editable to the world so that test user can access it. Revert the changes after verification
   3. Change the ownership to edit the file.

Answer.

**To give test access to edit “output” file you can make that files edit permission enabled for everyone or you have to give test permissions (add it to sudo group or to sudoers list).can also add test to that files group (if group has -rwx permission)#sudo usermod -a -G sudo test**

**$login test**

**1.**

**$sudo usermod -a -G test**

**$ls -l ./etc/output**

**$sudo chmod g+r+w+x output**

**$sudo chmod g-r-w-x output**

**2.**

**$sudo chmod 777 output**

**$echo “edit” >> output**

**$sudo chmod 777 output**

**3.**

**$chown test output.txt**

1. Create alias with your name so that it creates a file as "/tmp/aliastesting".

**$alias surya= “touch ~/tmp/aliastesting”**

1. Edit ~/.bashrc file such that when you change to "test" user it should clear the screen and print "Welcome".

Answer.

1. Install “zip” package.

Answer.

**$sudo apt install zip**

1. Compress "output" and "password\_backup" files into a tar ball. List the files present inside the tar created.

Answer.

**$tar -cvzf tarball /etc/output /etc/password\_backup**

**$tar -ztvf tarball**

1. scp this file to test user

Answer.

**$scp tarball test@//://**

1. Unzip this tar file by logging into the remote server

Answer.

**$ssh -i /path\_to\_key test@ipaddress**

**$tar -xzvf tarball**

1. Download any image from web and move to desktop

Answer.

**$wget http://www.picture.com/abc.jpg**

**$mv ~ /abc.jpg ~/desktop**

1. How to get help of commands usages.

Answer.

**$man command\_name**

1. Create a symlink of /etc/services into /tmp/ports-info

Answer. **$ln -s /etc/services /tmp/ports-info**

1. You are appointed as a Software/DevOps Engineer in ABC media services. On your first day you need to troubleshoot a problem. There is a command “xyz” somewhere installed in that linux system. But as a new joinee you do not have any idea about where is that Installed. How can you check that?

Answer.

**$which xyz (shows the full path)**

**$whereis xyz (locates the binary, source, and manual page files for a command)**