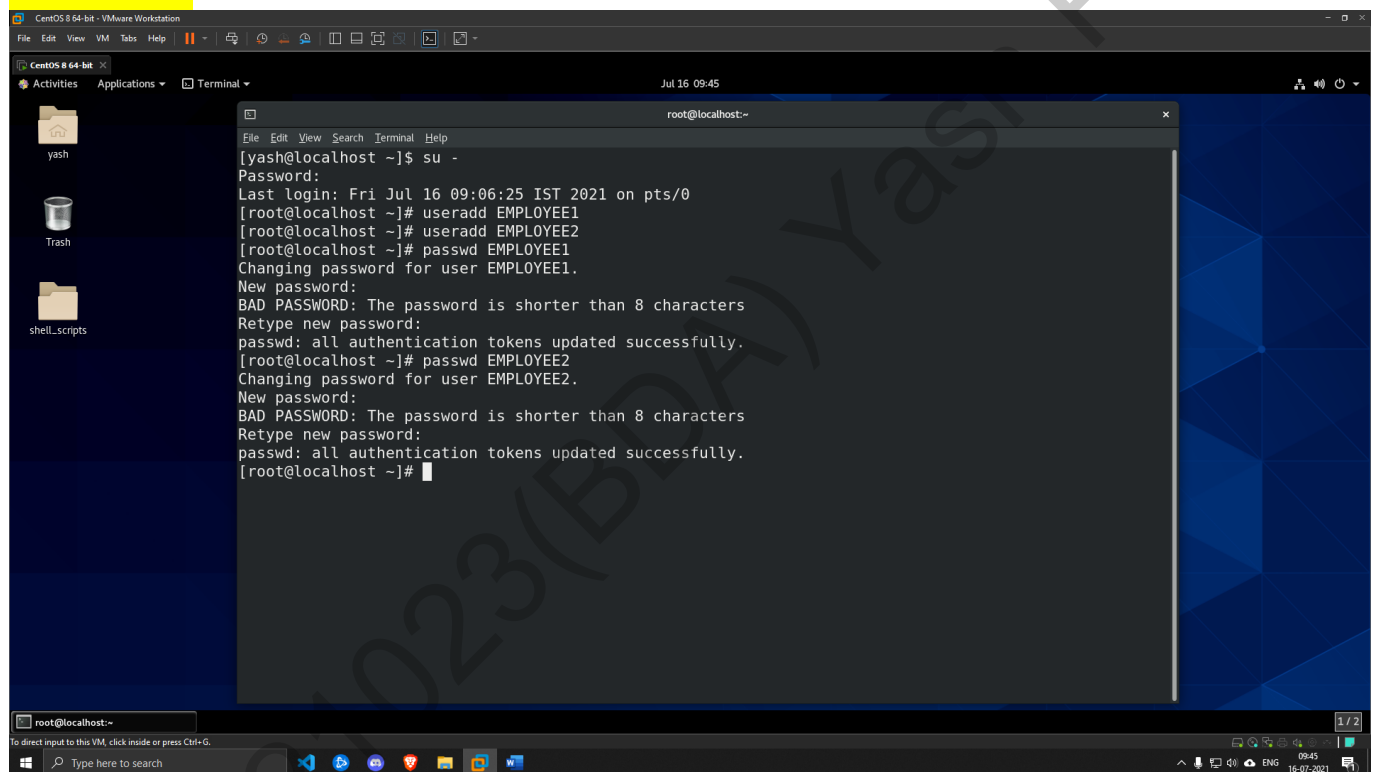


Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: BOSS (2CSE204)
PRACTICAL-EXAM

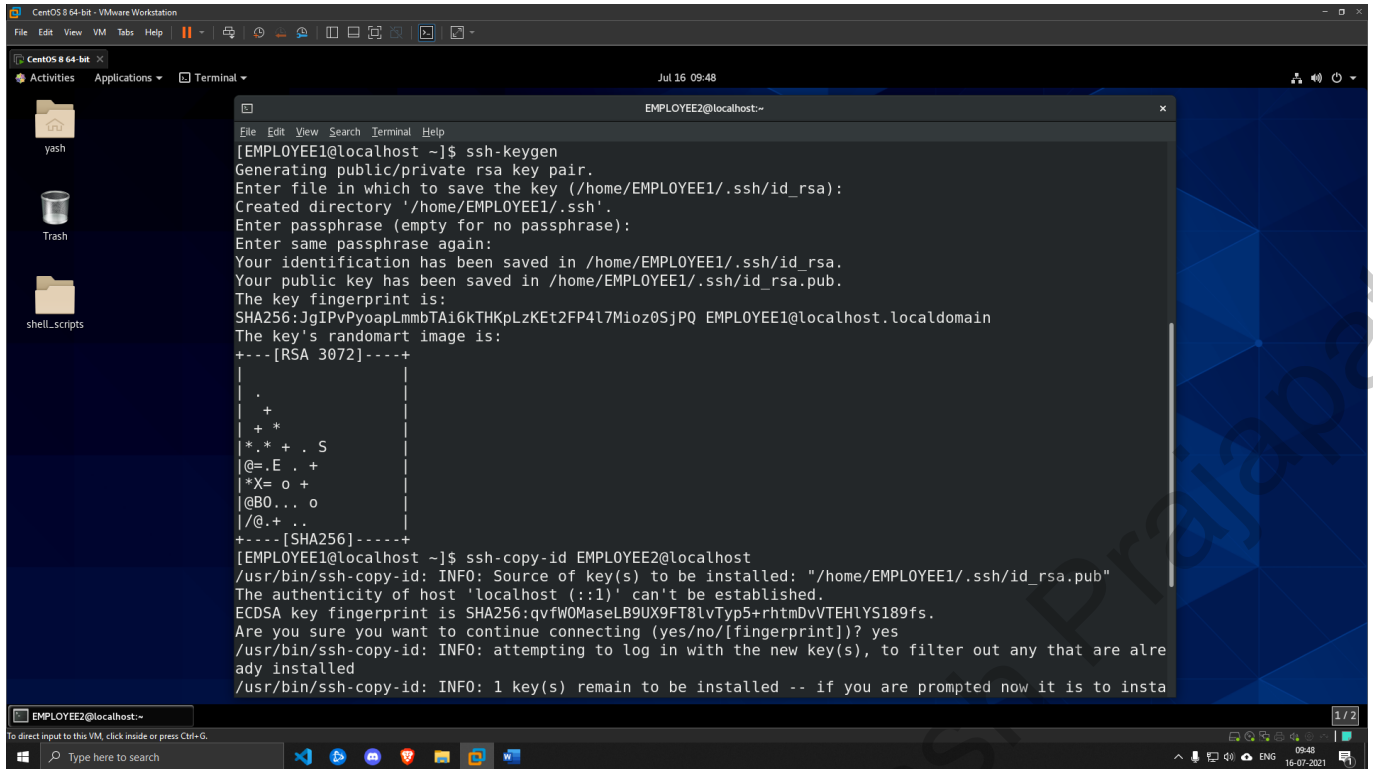
Sahil is working in HR department of Jakarta PVT LTD company. He wants to perform certain operations as per following. Kindly follow it and provide appropriate solution for it. (Make suitable assumptions).

- 1. Create two users EMPLOYEE1 & EMPLOYEE2. Also set passwords for all users. Switch to EMPLOYEE1. Generate public private key pair for EMPLOYEE1. Share public key of EMPLOYEE1 with EMPLOYEE2 and confirm that key sharing is successfully done.**

SOLUTION



```
CentOS 8 64-bit - VMware Workstation
File Edit View VM Tab Help
CentOS 8 64-bit
Activities Applications Terminal
yash
Trash
shell_scripts
root@localhost:~
File Edit View Search Terminal Help
[yash@localhost ~]$ su -
Password:
Last login: Fri Jul 16 09:06:25 IST 2021 on pts/0
[root@localhost ~]# useradd EMPLOYEE1
[root@localhost ~]# useradd EMPLOYEE2
[root@localhost ~]# passwd EMPLOYEE1
Changing password for user EMPLOYEE1.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# passwd EMPLOYEE2
Changing password for user EMPLOYEE2.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]#
```



```

[EMPLOYEE1@localhost ~]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/EMPLOYEE1/.ssh/id_rsa):
Created directory '/home/EMPLOYEE1/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/EMPLOYEE1/.ssh/id_rsa.
Your public key has been saved in /home/EMPLOYEE1/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:JgIPvPyoapLmmbTAi6kTHKpLzKEt2FP4l7Mioz0SjPQ EMPLOYEE1@localhost.localdomain
The key's randomart image is:
+----[RSA 3072]-----+
|
| .
| +
| + *
| * . + . S
| @ = . E . +
| * X = o +
| @ B O . . . o
| / @ . + . .
+----[SHA256]-----+
[EMPLOYEE1@localhost ~]$ ssh-copy-id EMPLOYEE2@localhost
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/EMPLOYEE1/.ssh/id_rsa.pub"
The authenticity of host 'localhost (::1)' can't be established.
ECDSA key fingerprint is SHA256:qvfw0MaseLB9UX9FT8lvTyp5+rhtmDvVTEHLYS189fs.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
EMPLOYEE2@localhost's password:

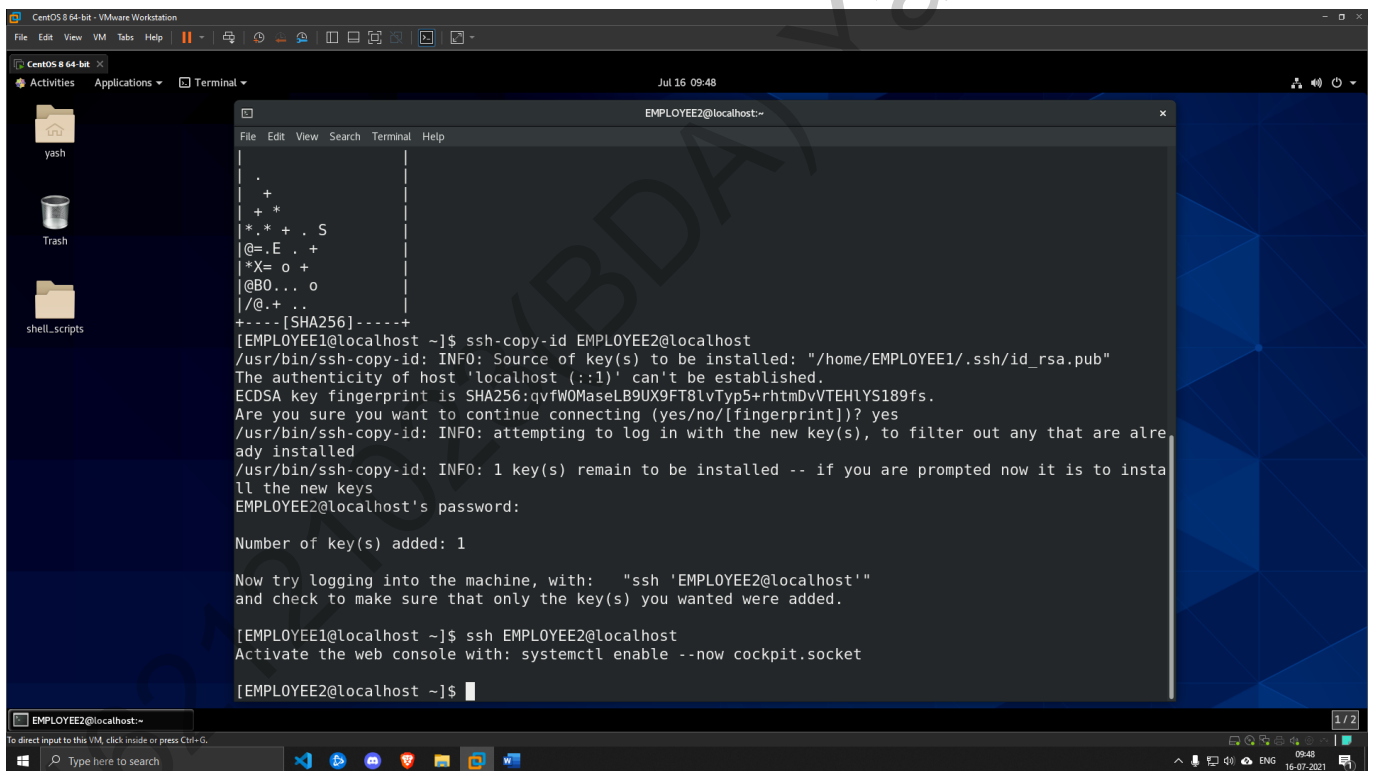
Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'EMPLOYEE2@localhost'"
and check to make sure that only the key(s) you wanted were added.

[EMPLOYEE1@localhost ~]$ ssh EMPLOYEE2@localhost
Activate the web console with: systemctl enable --now cockpit.socket

[EMPLOYEE2@localhost ~]$

```



```

[EMPLOYEE1@localhost ~]$ ssh-copy-id EMPLOYEE2@localhost
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/EMPLOYEE1/.ssh/id_rsa.pub"
The authenticity of host 'localhost (::1)' can't be established.
ECDSA key fingerprint is SHA256:qvfw0MaseLB9UX9FT8lvTyp5+rhtmDvVTEHLYS189fs.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
EMPLOYEE2@localhost's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'EMPLOYEE2@localhost'"
and check to make sure that only the key(s) you wanted were added.

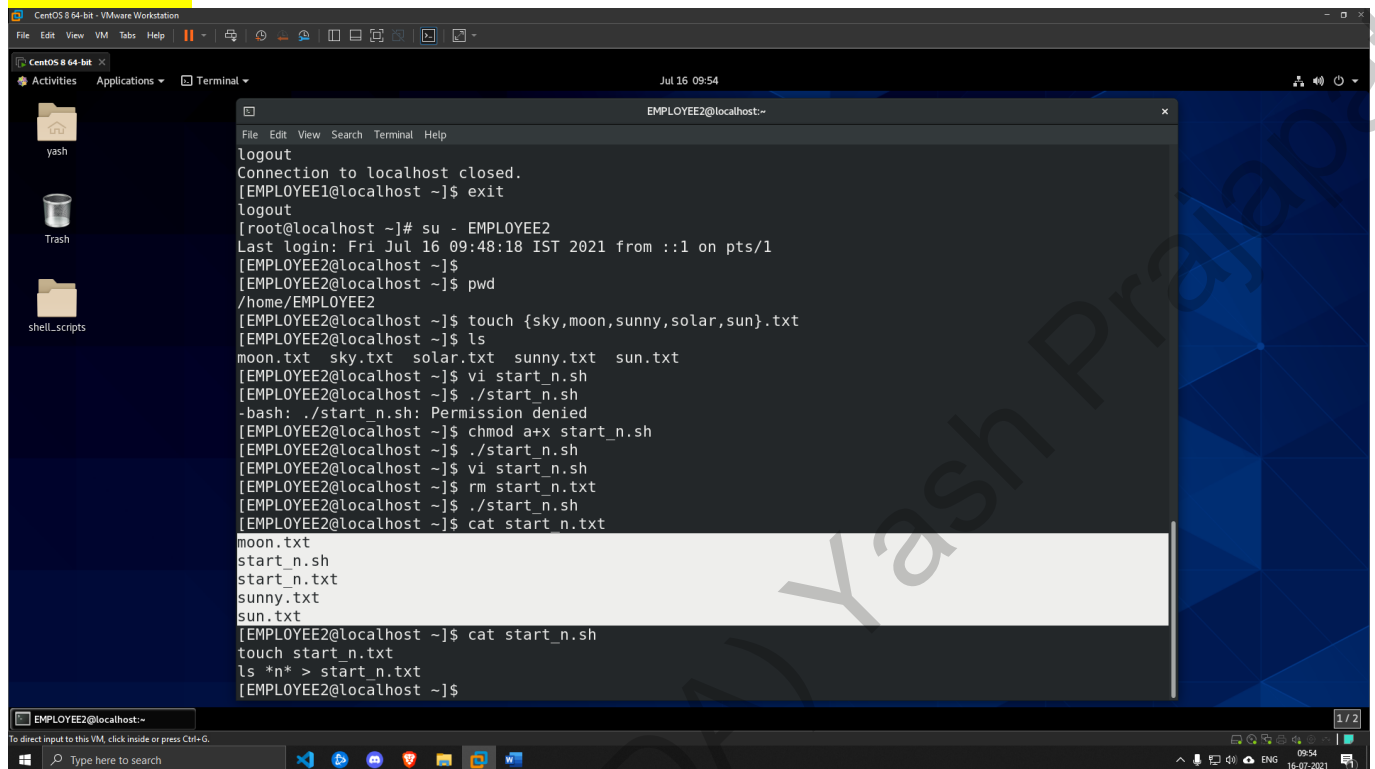
[EMPLOYEE1@localhost ~]$ ssh EMPLOYEE2@localhost
Activate the web console with: systemctl enable --now cockpit.socket

[EMPLOYEE2@localhost ~]$

```

2. Switch to user EMPLOYEE2 and create five files at home directory of current logged in user with name sky.txt, moon.txt, sunny.txt, solar.txt, sun.txt. He wants to find all the files which file name is having character "n" and store it in to start_n.txt file using shell script.

SOLUTION

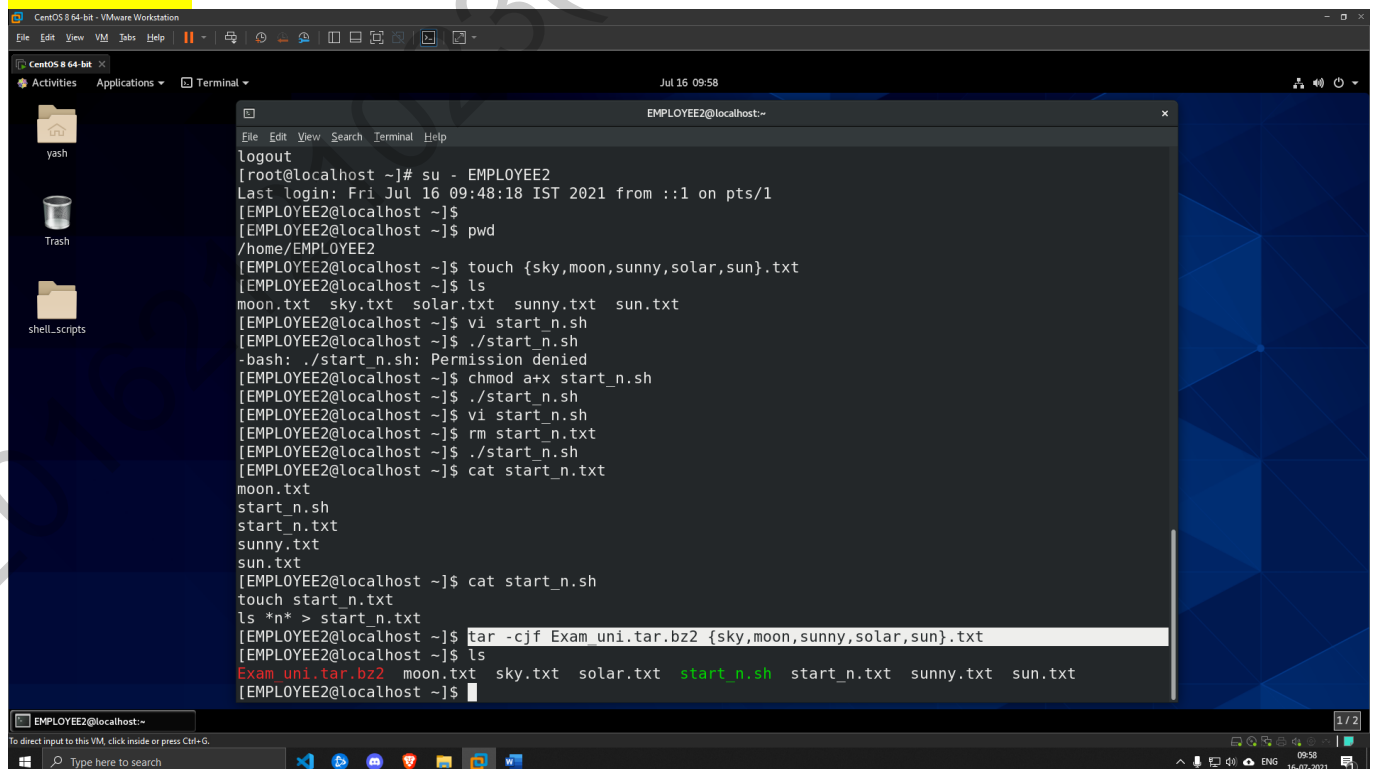


```

EMPLOYEE2@localhost:~$ logout
Connection to localhost closed.
[EMPLOYEE1@localhost ~]$ exit
logout
[root@localhost ~]# su - EMPLOYEE2
Last login: Fri Jul 16 09:48:18 IST 2021 from ::1 on pts/1
[EMPLOYEE2@localhost ~]$
[EMPLOYEE2@localhost ~]$ pwd
/home/EMPLOYEE2
[EMPLOYEE2@localhost ~]$ touch {sky,moon,sunny,solar,sun}.txt
[EMPLOYEE2@localhost ~]$ ls
moon.txt sky.txt solar.txt sunny.txt sun.txt
[EMPLOYEE2@localhost ~]$ vi start_n.sh
[EMPLOYEE2@localhost ~]$ ./start_n.sh
-bash: ./start_n.sh: Permission denied
[EMPLOYEE2@localhost ~]$ chmod a+x start_n.sh
[EMPLOYEE2@localhost ~]$ ./start_n.sh
[EMPLOYEE2@localhost ~]$ vi start_n.sh
[EMPLOYEE2@localhost ~]$ rm start_n.txt
[EMPLOYEE2@localhost ~]$ ./start_n.sh
[EMPLOYEE2@localhost ~]$ cat start_n.txt
moon.txt
start_n.sh
start_n.txt
sunny.txt
sun.txt
[EMPLOYEE2@localhost ~]$ cat start_n.sh
touch start_n.txt
ls *n* > start_n.txt
[EMPLOYEE2@localhost ~]$
  
```

3. Create new tar file Exam_uni.tar.bz2 and compress all five files.

SOLUTION



```

EMPLOYEE2@localhost:~$ touch {sky,moon,sunny,solar,sun}.txt
EMPLOYEE2@localhost:~$ ls
moon.txt sky.txt solar.txt sunny.txt sun.txt
EMPLOYEE2@localhost:~$ vi start_n.sh
EMPLOYEE2@localhost:~$ ./start_n.sh
-bash: ./start_n.sh: Permission denied
EMPLOYEE2@localhost:~$ chmod a+x start_n.sh
EMPLOYEE2@localhost:~$ ./start_n.sh
EMPLOYEE2@localhost:~$ vi start_n.sh
EMPLOYEE2@localhost:~$ rm start_n.txt
EMPLOYEE2@localhost:~$ ./start_n.sh
EMPLOYEE2@localhost:~$ cat start_n.txt
moon.txt
start_n.sh
start_n.txt
sunny.txt
sun.txt
EMPLOYEE2@localhost:~$ cat start_n.sh
touch start_n.txt
ls *n* > start_n.txt
EMPLOYEE2@localhost:~$ tar -cjf Exam_uni.tar.bz2 {sky,moon,sunny,solar,sun}.txt
EMPLOYEE2@localhost:~$ ls
Exam_uni.tar.bz2 moon.txt sky.txt solar.txt start_n.sh start_n.txt sunny.txt sun.txt
EMPLOYEE2@localhost:~$
  
```

4. Switch to EMPLOYEE1. Synchronize Exam_uni.tar.bz2 and start_n.txt files from user EMPLOYEE2 to current user. Extract Exam_uni.tar.bz2 at home directory of current user.

SOLUTION

```

EMPLOYEE2@localhost:~$ touch start_n.txt
EMPLOYEE2@localhost:~$ touch start_n.txt
EMPLOYEE2@localhost:~$ ls *n* > start_n.txt
EMPLOYEE2@localhost:~$ tar -cjf Exam_uni.tar.bz2 {sky,moon,sunny,solar,sun}.txt
EMPLOYEE2@localhost:~$ ls
Exam_uni.tar.bz2  moon.txt  sky.txt  solar.txt  start_n.sh  start_n.txt  sunny.txt  sun.txt
EMPLOYEE2@localhost:~$ su - EMPLOYEE1
Password:
Last login: Fri Jul 16 09:45:54 IST 2021 on pts/0
[EMPLOYEE1@localhost ~]$ scp EMPLOYEE2@localhost:/home/EMPLOYEE2/Exam_uni.tar.bz2 EMPLOYEE1@localhost:/home/EMPLOYEE1
The authenticity of host 'localhost (::1)' can't be established.
ECDSA key fingerprint is SHA256:qvfwOMaseLB9UX9FT8lvTyp5+rhtmDvVTEHLYS189fs.
Are you sure you want to continue connecting (yes/no/[fingerprint])? YES
Warning: Permanently added 'localhost' (ECDSA) to the list of known hosts.
EMPLOYEE1@localhost's password:
Exam_uni.tar.bz2                                100% 202   244.2KB/s   00:00
Connection to localhost closed.
[EMPLOYEE1@localhost ~]$ scp EMPLOYEE2@localhost:/home/EMPLOYEE2/start_n.txt EMPLOYEE1@localhost:/home/EMPLOYEE1
EMPLOYEE1@localhost's password:
start_n.txt                                     100% 50    78.7KB/s     00:00
Connection to localhost closed.
[EMPLOYEE1@localhost ~]$ tar -xjf ~/Exam_uni.tar.bz2
[EMPLOYEE1@localhost ~]$ ls
Exam_uni.tar.bz2  moon.txt  sky.txt  solar.txt  start_n.txt  sunny.txt  sun.txt
[EMPLOYEE1@localhost ~]$
  
```

5. Create five new blank files as file1.txt to file5.txt using single command at home directory of current logged in user. Search all the files using from home directory which are having keyword "o" at any position position using real time search and append output in start_n.txt file.

SOLUTION

```

[EMPLOYEE1@localhost ~]$ touch file{1..5}.txt
[EMPLOYEE1@localhost ~]$ ls
Exam_uni.tar.bz2  file2.txt  file4.txt  moon.txt  solar.txt  sunny.txt
file1.txt         file3.txt  file5.txt  sky.txt  start_n.txt  sun.txt
[EMPLOYEE1@localhost ~]$ find -name "*o*"
./mozilla
./mozilla/extensions
./bash_logout
./bash_profile
./ssh/known_hosts
./bash_history
./moon.txt
./solar.txt
[EMPLOYEE1@localhost ~]$ find -name "*o*" >> start_n.txt
[EMPLOYEE1@localhost ~]$ cat start_n.txt
moon.txt
start_n.sh
start_n.txt
sunny.txt
sun.txt
./mozilla
./mozilla/extensions
./bash_logout
./bash_profile
./ssh/known_hosts
./bash_history
./moon.txt
./solar.txt
[EMPLOYEE1@localhost ~]$
  
```