Assignment No.2

Name: Bhavin Patil

Roll No. 66

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1. Select any 5 capitals of states in India and enter them in a file named *capitals1*. Choose 5 more capitals and enter them in a file named *capitals2*. Choose 5 more capitals and enter them in a file named *capitals3*. Concatenate all 3 files and redirect the output to a file named *capitals*.

2. Concatenate the file *capitals2* at the end of file *capitals*.

3. Redirect the file *capitals* as an input to the command "wc –l".

```
bhavin@predator:~/Temp$ wc -l capitals
3 capitals
bhavin@predator:~/Temp$
```
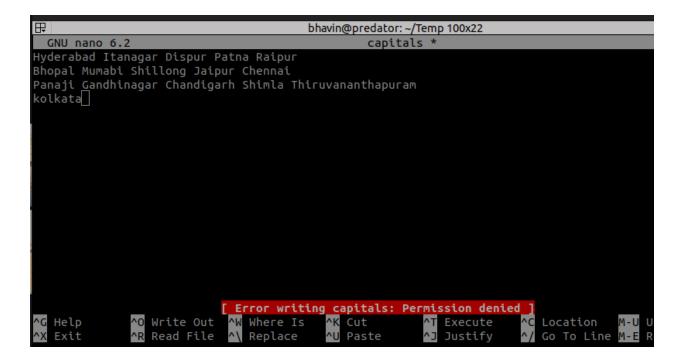
4. Give read and write permissions to all users for the file *capitals*.

```
                                              bhavin@predator: ~/Temp 100x22
bhavin@predator:~/Temp$ sudo chmod a+rwx capitals
[sudo] password for bhavin:
bhavin@predator:~/Temp$ ls -l
total 16
-rwxrwxrwx 1 bhavin bhavin 133 Sep 13 11:13 capitals
-rw-rw-r-- 1 bhavin bhavin  39 Sep 13 11:08 capitals1
-rw-rw-r-- 1 bhavin bhavin  56 Sep 13 11:09 capitals2
-rw-rw-r-- 1 bhavin bhavin  38 Sep 13 11:10 capitals3
bhavin@predator:~/Temp$
```

5. Give read permissions only to the owner of the file *capitals*. Open the file, make some changes and try to save it. What happens?

```
                                              bhavin@predator: ~/Temp 1(
bhavin@predator:~/Temp$ ls -lah
total 24K
drwxrwxr-x  2 bhavin bhavin 4.0K Sep 13 11:12 .
drwxr-x--- 36 bhavin bhavin 4.0K Sep 13 11:04 ..
-rwxrwxrwx  1 bhavin bhavin  133 Sep 13 11:13 capitals
-rw-rw-r--  1 bhavin bhavin   39 Sep 13 11:08 capitals1
-rw-rw-r--  1 bhavin bhavin   56 Sep 13 11:09 capitals2
-rw-rw-r--  1 bhavin bhavin   38 Sep 13 11:10 capitals3
bhavin@predator:~/Temp$ chmod u-wx capitals
bhavin@predator:~/Temp$ ls -lah
total 24K
drwxrwxr-x  2 bhavin bhavin 4.0K Sep 13 11:12 .
drwxr-x--- 36 bhavin bhavin 4.0K Sep 13 11:04 ..
-r--rwxrwx  1 bhavin bhavin  133 Sep 13 11:13 capitals
-rw-rw-r--  1 bhavin bhavin   39 Sep 13 11:08 capitals1
-rw-rw-r--  1 bhavin bhavin   56 Sep 13 11:09 capitals2
-rw-rw-r--  1 bhavin bhavin   38 Sep 13 11:10 capitals3
bhavin@predator:~/Temp$ nano capitals
```

```
  GNU nano 6.2                              capitals *
Hyderabad Itanagar Dispur Patna Raipur
Bhopal Mumabi Shillong Jaipur Chennai
Panaji Gandhinagar Chandigarh Shimla Thiruvananthapuram
kolkata








                            [ Error writing capitals: Permission denied ]
^G Help         ^O Write Out  ^W Where Is   ^K Cut        ^T Execute    ^C Location   M-U U
^X Exit         ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^/ Go To Line M-E R
```

6. Create an alias to concatenate the 3 files *capitals1, capitals2, capitals3* and redirect the output to a file named *capitals*. Activate the alias and make it run.

```
bhavin@predator:~/Temp$ alias CAP="cat capitals1 capitals3 capitals2 > capital"
bhavin@predator:~/Temp$ ls
capitals  capitals1  capitals2  capitals3
bhavin@predator:~/Temp$ CAP
bhavin@predator:~/Temp$ ls
capital  capitals  capitals1  capitals2  capitals3
bhavin@predator:~/Temp$ cat capital
Hyderabad Itanagar Dispur Patna Raipur
Bhopal Mumabi Shillong Jaipur Chennai
Panaji Gandhinagar Chandigarh Shimla Thiruvananthapuram
bhavin@predator:~/Temp$
```

7. What are the environment variables PATH, HOME and TERM set to on your terminal?

```
bhavin@predator:~/Temp$ sudo cat /etc/environment
PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/us
r/local/games:/snap/bin"
bhavin@predator:~/Temp$
```

8. Find out the number of times the string "the" appears in the file *mydate*.

```
bhavin@predator:~/Temp$ grep -o -i " the " mydate | wc -l
25
bhavin@predator:~/Temp$
```

9. Find out the line numbers on which the string "date" exists in *mydate*.

bhavin@predator: ~/Temp 80x24
```
bhavin@predator:~/Temp$ grep -c " the " mydate
16
bhavin@predator:~/Temp$
```

10. Print all lines of *mydate* except those that have the letter "i" in them.

bhavin@predator: ~/Temp 80x24
```
bhavin@predator:~/Temp$ grep -v "i" mydate
DATE(1)                          User Commands                          DATE(1)

NAME

SYNOPSIS
       date [OPTION]... [+FORMAT]

DESCRIPTION

       too.

       -d, --date=STRING

       --debug
             stderr

             2006-08-14T02:34:56-06:00

             2006 02:34:56 -0600

       --rfc-3339=FMT
             2006-08-14 02:34:56-06:00
```
(efault)

11. Create the file *monotonic* as follows:

   ^a?b?b?c?…………..x?y?z$

   Run the egrep command for *monotonic* against /usr/dict/words and search for all 4 letter words.

12. List 5 states in north east India in a file *mystates*. List their corresponding capitals in a file *mycapitals*. Use the *paste* command to join the 2 files.

```
bhavin@predator: ~/Temp 80x24
bhavin@predator:~/Temp$ ls
capital  capitals  capitals1  capitals2  capitals3  mydate
bhavin@predator:~/Temp$ nano mystates
bhavin@predator:~/Temp$ ls
capital  capitals  capitals1  capitals2  capitals3  mydate  mystates
bhavin@predator:~/Temp$ nano mycapitals
bhavin@predator:~/Temp$ ls
capital   capitals1  capitals3   mydate
capitals  capitals2  mycapitals  mystates
bhavin@predator:~/Temp$ paste mystates mycapitals
Arunachal Pradesh      Itanagar
Assam   Guwahati
Manipur Imphal
Meghalaya       Shillong
Mizoram Aizawl
bhavin@predator:~/Temp$
```

13. Use the *cut* command to print the 1st and 3rd columns of the /etc/passwd file for all students in this class.

```
bhavin@predator: ~/Temp 80x24
bhavin@predator:~/Temp$ cut -c 1,3 /etc/passwd
ro
de
bn
ss
sn
gm
mn
l:
mi
nw
uc
po
ww
bc
ls
ic
ga
nb
ss
ss
ms
ss
```

14. Count the number of people logged in and also trap the users in a file using the *tee* command.

```
bhavin@predator:~/Temp$ w
 \ 13:22:09 up 21 min,  1 user,  load average: 0.73, 0.71, 0.49
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
bhavin   :1       :1               13:00    ?xdm?  7:51   0.00s /usr/libexec/gd
bhavin@predator:~/Temp$ w -h | wc -l
1
bhavin@predator:~/Temp$ w -h | wc -l | tee file1
1
bhavin@predator:~/Temp$ ls
capital   capitals1  capitals3  mycapitals  mystates
capitals  capitals2  file1      mydate
bhavin@predator:~/Temp$ cat file1
1
bhavin@predator:~/Temp$
```