

**CSC3320 System Level Programming**  
**Lab Assignment 3 (Post-Lab)**

**Name: Venkata Mani Mohana Rishitha Srikakulapu**

**Lab - 3**

**Part 2: VI Editing - Large file**

*Please write the commands you will issue to complete the following tasks and answering corresponding questions step by step in your report.*

3) Use vi to open "RealEstate.csv".

\$ vi RealEstate.csv

4) Move the cursor to the last line (without knowing the number of last line).

As the vi editor is already in command mode press G to move the cursor to the last line which is also the end of the file.

5) Display line number.

We can use any of the two

: . (or) : \$

As the cursor is already at the beginning of last line ,

: . - command gives the line number of current line which is 988.

: \$ - command displays the line number of the last line of the file which is 988.

6) Search for the transaction for the estate located at "111 EAST"

Which line is this string located? (Please just write down the line number)

Delete this line.

/111 EAST / - command is used to locate "111 EAST", located in line number 896

: 896 - command moves cursor to beginning of the line where 111 EAST is located.

Pressing dd deletes that current line.

7) Move the cursor to the line 50.

: 50 - command moves cursor to line 50.

8) Substitute all comma "," with colon ":" from line 50 to line 54.

: 50, 54 s/, /:/g

9) Copy line 50 to line 54 to the end of file.

: 50, 54 y - command yanks the lines.

: \$ - moves cursor to end of file.

p - prints the yanked lines at the cursor point.

10) Remove line 50 to line 54.

: 50, 54 d - command deletes lines 50 to 54.

11) Describe how to enter the text mode and insert a new line "Recorded in year 2008" between line 1 and line 2.

: 1 – command moves cursor to the line 1. Press ‘o’ so the editor moves to text entry mode and text gets added after the line 1 (current line) and type "Recorded in year 2008"

12) Switch back to command mode.

Press Esc key to switch back to command mode.

13) Save the file and quit vi.

: wq to save and quit from the file in vi

### Part 3: Permissions for files

10) Try read "Try.c" again using cat.

\$cat Try.c

Attach a screenshot of the output.

```
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$ vi Try.c
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$ cat Try.c
cat: Try.c: Permission denied
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$
```

12) Check the file permissions for file "Try.c" again. And explain the meaning of each character in the file permission string.

File permission is shown as : -r- -r- -r- -

The leftmost 3 characters r- - tells us that the user (owner of the file) can only read the file.

The middle 3 characters r- - tells us the other users in the same group as the owner can only read the file.

The last 3 characters r- - tells us the other users in the other groups different from owner can only read the file.

```
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$ chmod 444 Try.c
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$ ls -l Try.c
-r--r--r-- 1 vsrikakulapu1@gsuad.gsu.edu vsrikakulapu1@gsuad.gsu.edu 361 Jan 3
0 19:14 Try.c
```

15) Can you find some error message at the bottom of the screen? If yes, what is it and how to quit the vi editor without saving the modification.

Write answer in your answer sheet.

The error is : ‘readonly’ option is set (add ! to override)

```
E45: 'readonly' option is set (add ! to override)
```

To quit the vi editor without saving the modification we use

: q!

Which force quits the vi without saving the changes made.

16) Use chmod to add write the permission to all the users for "Try.c".

Write answer in your answer sheet.

```
$ chmod a+w Try.c
```

17) Check the file permissions for file "Try.c" again. And explain the meaning of each character in the file permission string.

Write answer in your answer sheet.

```
$ ls -l Try.c
```

File permission is shown as : -rw-rw-rw-

The first – indicates that the file is a regular file and is not a directory.

The first rw- indicates that the user has permissions to read and write to the file but not to execute the file.

The second rw- indicates that the group has permissions to read and write to the file but not to execute the file.

The third rw- indicates that the others have permissions to read and write to the file but not to execute the file.

The file doesn't allow anyone to execute the file whereas it allows all the user, groups and others to read and write the file.

```
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$ chmod a+w Try.c
[vsrikakulapu1@gsuad.gsu.edu@snowball Lab3]$ ls -l Try.c
-rw-rw-rw-. 1 vsrikakulapu1@gsuad.gsu.edu vsrikakulapu1@gsuad.gsu.edu 361 Jan 3
0 19:14 Try.c
```

#### Part 4: Permissions for directories

| Owner's permissions | ls            | mkdir                | cat >       | rm              | cp                 | cd                   |
|---------------------|---------------|----------------------|-------------|-----------------|--------------------|----------------------|
|                     | Read contents | Create sub-directory | Create file | Remove contents | Copy contents from | Enter into directory |
| ---                 | N             | N                    | N           | N/A             | N/A                | N                    |
| --X                 | N             | N                    | N           | N/A             | N/A                | Y                    |
| -W-                 | N             | N                    | N           | N/A             | N/A                | N                    |
| -WX                 | N             | Y                    | Y           | Y               | Y                  | Y                    |
| r--                 | N             | N                    | N           | N/A             | N/A                | N                    |
| r-X                 | Y             | N                    | Y           | N/A             | Y                  | Y                    |
| rW-                 | N             | N                    | N           | N/A             | N/A                | N                    |
| rWX                 | Y             | Y                    | Y           | Y               | Y                  | Y                    |

N/A- refers to not applicable as the command failed in the previous step.