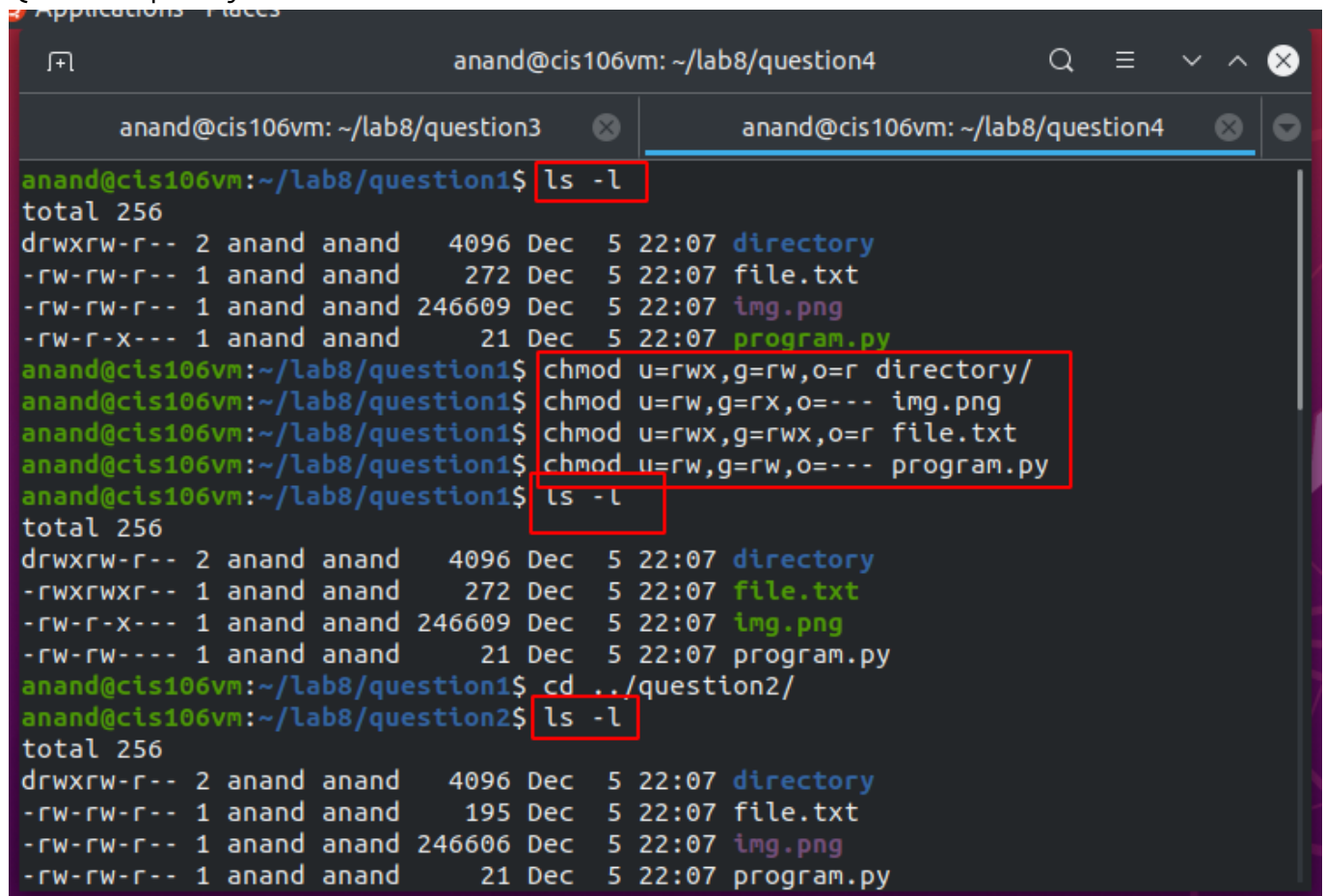


Lab 8: File Permissions

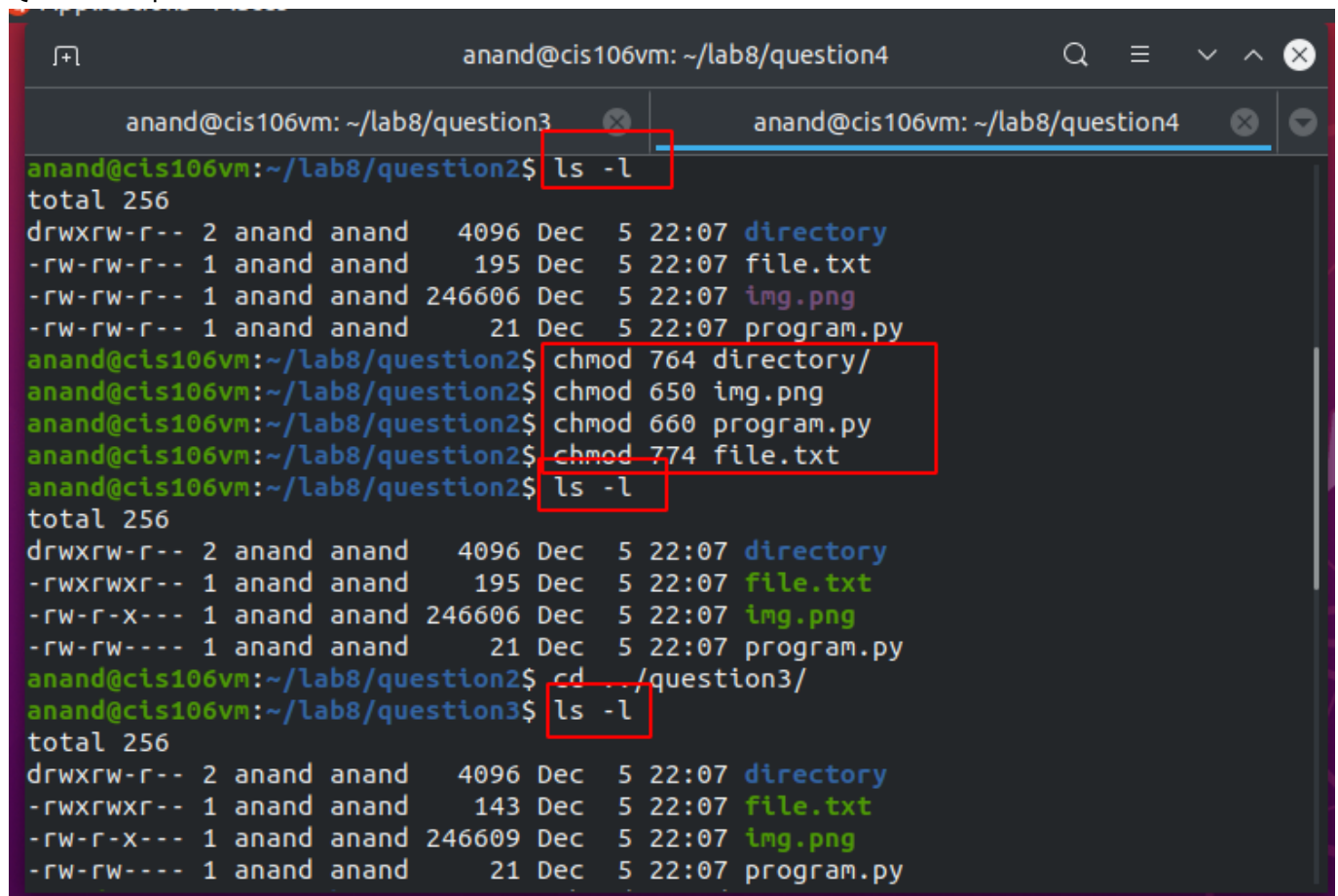
Question 1 | Use symbolic notation



The image shows a terminal window with two tabs: 'anand@cis106vm: ~/lab8/question3' and 'anand@cis106vm: ~/lab8/question4'. The active tab is 'anand@cis106vm: ~/lab8/question4'. The terminal output shows the following commands and results:

```
anand@cis106vm:~/lab8/question1$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rw-rw-r-- 1 anand anand 272 Dec 5 22:07 file.txt
-rw-rw-r-- 1 anand anand 246609 Dec 5 22:07 img.png
-rw-r-x--- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question1$ chmod u=rwx,g=rw,o=r directory/
anand@cis106vm:~/lab8/question1$ chmod u=rw,g=rx,o=--- img.png
anand@cis106vm:~/lab8/question1$ chmod u=rwx,g=rwx,o=r file.txt
anand@cis106vm:~/lab8/question1$ chmod u=rw,g=rw,o=--- program.py
anand@cis106vm:~/lab8/question1$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rwxrwxr-- 1 anand anand 272 Dec 5 22:07 file.txt
-rw-r-x--- 1 anand anand 246609 Dec 5 22:07 img.png
-rw-rw---- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question1$ cd ../question2/
anand@cis106vm:~/lab8/question2$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rw-rw-r-- 1 anand anand 195 Dec 5 22:07 file.txt
-rw-rw-r-- 1 anand anand 246606 Dec 5 22:07 img.png
-rw-rw-r-- 1 anand anand 21 Dec 5 22:07 program.py
```

Question 2 | Use numeric notation



The image shows a terminal window with two tabs: 'anand@cis106vm: ~/lab8/question3' and 'anand@cis106vm: ~/lab8/question4'. The active tab is 'anand@cis106vm: ~/lab8/question4'. The terminal output shows the following commands and results:

```
anand@cis106vm:~/lab8/question2$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rw-rw-r-- 1 anand anand 195 Dec 5 22:07 file.txt
-rw-rw-r-- 1 anand anand 246606 Dec 5 22:07 img.png
-rw-rw-r-- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question2$ chmod 764 directory/
anand@cis106vm:~/lab8/question2$ chmod 650 img.png
anand@cis106vm:~/lab8/question2$ chmod 660 program.py
anand@cis106vm:~/lab8/question2$ chmod 774 file.txt
anand@cis106vm:~/lab8/question2$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rwxrwxr-- 1 anand anand 195 Dec 5 22:07 file.txt
-rw-r-x--- 1 anand anand 246606 Dec 5 22:07 img.png
-rw-rw---- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question2$ cd ../question3/
anand@cis106vm:~/lab8/question3$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rwxrwxr-- 1 anand anand 143 Dec 5 22:07 file.txt
-rw-r-x--- 1 anand anand 246609 Dec 5 22:07 img.png
-rw-rw---- 1 anand anand 21 Dec 5 22:07 program.py
```

Red boxes highlight the following commands and their outputs:

- `ls -l` (first instance)
- `chmod 764 directory/`
- `chmod 650 img.png`
- `chmod 660 program.py`
- `chmod 774 file.txt`
- `ls -l` (second instance)
- `cd ../question3/`
- `ls -l` (third instance)

Question 3 | Use numeric notation

```
anand@cis106vm: ~/lab8/question4
anand@cis106vm: ~/lab8/question3
anand@cis106vm:~/lab8/question3$ ls -l
total 256
drwxrw-r-- 2 anand anand 4096 Dec 5 22:07 directory
-rwxrwxr-- 1 anand anand 143 Dec 5 22:07 file.txt
-rw-r-x--- 1 anand anand 246609 Dec 5 22:07 img.png
-rw-rw--- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question3$ chmod 561 directory/
anand@cis106vm:~/lab8/question3$ chmod 777 img.png
anand@cis106vm:~/lab8/question3$ chmod 756 program.py
anand@cis106vm:~/lab8/question3$ chmod 560 file.txt
anand@cis106vm:~/lab8/question3$ ls -l
total 256
dr-xrw--x 2 anand anand 4096 Dec 5 22:07 directory
-r-xrw--- 1 anand anand 143 Dec 5 22:07 file.txt
-rwxrwxrwx 1 anand anand 246609 Dec 5 22:07 img.png
-rwxr-xrw- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question3$ cd ../question4/
anand@cis106vm:~/lab8/question4$ ls -l
total 256
drwxrwxr-x 2 anand anand 4096 Dec 5 22:07 directory
-rw-rw-r-- 1 anand anand 228 Dec 5 22:07 file.txt
-rw-rw-r-- 1 anand anand 246608 Dec 5 22:07 img.png
-rw-rw-r-- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question4$ chmod u=x,g=wx,o=rw directory/
anand@cis106vm:~/lab8/question4$ chmod u=rwx,g=rx,o=--- img.png
anand@cis106vm:~/lab8/question4$ chmod u=w,g=x,o=r program.py
anand@cis106vm:~/lab8/question4$ chmod u=rx,g=rw,o=wx file.txt
anand@cis106vm:~/lab8/question4$ ls -l
total 256
```

Question 4 | Use symbolic notation

```
anand@cis106vm: ~/lab8/question4
anand@cis106vm: ~/lab8/question3
anand@cis106vm: ~/lab8/question4
-rw-rw---- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question3$ chmod 561 directory/
anand@cis106vm:~/lab8/question3$ chmod 777 img.png
anand@cis106vm:~/lab8/question3$ chmod 756 program.py
anand@cis106vm:~/lab8/question3$ chmod 560 file.txt
anand@cis106vm:~/lab8/question3$ ls -l
total 256
dr-xrw---x 2 anand anand 4096 Dec 5 22:07 directory
-r-xrw--- 1 anand anand 143 Dec 5 22:07 file.txt
-rwxrwxrwx 1 anand anand 246609 Dec 5 22:07 img.png
-rwxr-xrw- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question3$ cd ../question4/
anand@cis106vm:~/lab8/question4$ ls -l
total 256
drwxrwxr-x 2 anand anand 4096 Dec 5 22:07 directory
-rw-rw-r-- 1 anand anand 228 Dec 5 22:07 file.txt
-rw-rw-r-- 1 anand anand 246608 Dec 5 22:07 img.png
-rw-rw-r-- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question4$ chmod u=x,g=wx,o=rw directory/
anand@cis106vm:~/lab8/question4$ chmod u=rwx,g=rx,o--- img.png
anand@cis106vm:~/lab8/question4$ chmod u=w,g=x,o=r program.py
anand@cis106vm:~/lab8/question4$ chmod u=rx,g=rw,o=wx file.txt
anand@cis106vm:~/lab8/question4$ ls -l
total 256
d--x-wxrw- 2 anand anand 4096 Dec 5 22:07 directory
-r-xrw--wx 1 anand anand 228 Dec 5 22:07 file.txt
-rwxr-x--- 1 anand anand 246608 Dec 5 22:07 img.png
--w---xr-- 1 anand anand 21 Dec 5 22:07 program.py
anand@cis106vm:~/lab8/question4$
```