

## Using Shell Redirection and Piping

### Redirection

```
sjcet@Z238-UL:~/martin$ cal 7 2020
      July 2020
Su Mo Tu We Th Fr Sa
                1  2  3  4
 5  6  7  8  9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

sjcet@Z238-UL:~/martin$ cal 7 2020 > sample2
sjcet@Z238-UL:~/martin$ cat sample2
      July 2020
Su Mo Tu We Th Fr Sa
                1  2  3  4
 5  6  7  8  9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31
```

```
sjcet@Z238-UL:~$ ls apple > file3
sjcet@Z238-UL:~$ cat file3
file1
file2
sjcet@Z238-UL:~$
```

### To append (add) to the file

```
sjcet@Z238-UL:~/martin$ cal 7 2020 >> sample2
sjcet@Z238-UL:~/martin$ cat sample2
      July 2020
Su Mo Tu We Th Fr Sa
                1  2  3  4
 5  6  7  8  9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31
```

```
sjcet@Z238-UL:~$ ls apple >> file3
sjcet@Z238-UL:~$ cat file3
file1
file2
sjcet@Z238-UL:~$
```

# Redirecting into Streams

## Redirecting Standard Error

```
sjcet@Z238-UL:~/apple$ cat does_not_exit 2>error2
sjcet@Z238-UL:~/apple$ cat error2
cat: does_not_exit: No such file or directory
sjcet@Z238-UL:~/apple$
```

```
sjcet@Z238-UL:~/apple$ ls -1 &>error2
sjcet@Z238-UL:~/apple$ cat error2
error1
error2
file1
file2
sjcet@Z238-UL:~/apple$
```

# Piping

```
sjcet@Z238-UL:~$ ls -l | more
total 228
drwxrwxr-x 28 sjcet sjcet 4096 Nov 24 11:05 anaconda3
drwxr-xr-x 3 sjcet sjcet 4096 Dec 3 2018 Android
drwxrwxr-x 2 sjcet sjcet 4096 Mar 30 08:52 AndroidStudioProjects
drwxrwxr-x 2 sjcet sjcet 4096 Apr 21 12:19 apple
drwxr-xr-x 2 sjcet sjcet 4096 Mar 30 08:49 Desktop
drwxr-xr-x 2 sjcet sjcet 4096 Apr 21 12:45 Documents
drwxr-xr-x 2 sjcet sjcet 4096 Apr 26 14:03 Downloads
drwxrwxr-x 2 sjcet sjcet 4096 Oct 4 2021 Exam
-rw-r--r-- 1 sjcet sjcet 8980 Dec 3 2018 examples.desktop
-rw-r--r-- 1 sjcet sjcet 63143 Nov 24 2018 exam-user.jpg
drwxrwxr-x 2 sjcet sjcet 4096 Apr 6 16:08 file1
-rw-rw-r-- 1 sjcet sjcet 12 Apr 21 11:28 file2
-rw-rw-r-- 1 sjcet sjcet 12 Apr 21 11:33 file3
drwxrwxr-x 2 sjcet sjcet 4096 Apr 21 11:11 martin
drwxr-xr-x 3 sjcet sjcet 4096 Feb 9 10:13 Music
drwxrwxr-x 22 sjcet sjcet 4096 Apr 20 15:25 NetBeansProjects
drwxrwxrwx 3 sjcet sjcet 4096 Sep 3 2019 openkiosk-47.0.2.2-2017-05-11-x86_64
drwxr-xr-x 2 sjcet sjcet 4096 Apr 1 15:59 Pictures
drwxr-xr-x 2 sjcet sjcet 4096 Dec 3 2018 Public
drwxrwxr-x 2 sjcet sjcet 4096 Mar 30 08:50 PycharmProjects
drwxrwxr-x 3 sjcet sjcet 4096 Dec 3 2018 R
--More--
```

```
sjcet@Z238-UL:~$ ls -l | wc
 30   263   1632
sjcet@Z238-UL:~$
sjcet@Z238-UL:~$
sjcet@Z238-UL:~$
```