

1)

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~/test_dir
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ mkdir test_dir
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cd test_dir/
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test_dir$ touch example.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test_dir$ mv example.txt renamed_example.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test_dir$ ls
renamed_example.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test_dir$
```

2)

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mail Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-timesync:x:100:102:systemd Time Synchronization,,,:/run/systemd:/bin/false
systemd-network:x:101:103:systemd Network Management,,,:/run/systemd/netif:/bin/false
systemd-resolve:x:102:104:systemd Resolver,,,:/run/systemd/resolve:/bin/false
systemd-bus-proxy:x:103:105:systemd Bus Proxy,,,:/run/systemd:/bin/false
syslog:x:104:108:./home/syslog:/bin/false
_apt:x:105:65534:./nonexistent:/bin/false
messagebus:x:106:110:./var/run/dbus:/bin/false
uuidd:x:107:111:./run/uuidd:/bin/false
lightdm:x:108:114:Light Display Manager:/var/lib/lightdm:/bin/false
whoopsie:x:109:117:./nonexistent:/bin/false
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/bin/false
avahi:x:111:120:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/bin/false
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/bin/false
colord:x:113:123:colord colour management daemon,,,:/var/lib/colord:/bin/false
speech-dispatcher:x:114:29:Speech Dispatcher,,,:/var/run/speech-dispatcher:/bin/false
hplip:x:115:7:HPLIP system user,,,:/var/run/hplip:/bin/false
kernoops:x:116:65534:Kernel Oops Tracking Daemon,,,:/bin/false
pulse:x:117:124:PulseAudio daemon,,,:/var/run/pulse:/bin/false
rtkit:x:118:126:RealtimeKit,,,:/proc:/bin/false
saned:x:119:127:./var/lib/saned:/bin/false
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ head -n 5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ tail -n 5 /etc/passwd
pulse:x:117:124:PulseAudio daemon,,,:/var/run/pulse:/bin/false
rtkit:x:118:126:RealtimeKit,,,:/proc:/bin/false
saned:x:119:127:,:/var/lib/saned:/bin/false
usbmux:x:120:46:usbmux daemon,,,:/var/lib/usbmux:/bin/false
onworks:x:1000:1000:onworks,,,:/home/onworks:/bin/bash
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

3)

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test_dir$ cat /etc/passwd | grep "root"
root:x:0:0:root:/root:/bin/bash
```

4)

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop  Downloads  Music  Public  test_dir
Documents examples.desktop Pictures Templates Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ zip -r test_dir.zip test_dir
adding: test_dir/ (stored 0%)
adding: test_dir/renamed_example.txt (stored 0%)
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop  Downloads  Music  Public  test_dir  Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ unzip test_dir.zip -d unzipped_dir
Archive: test_dir.zip
creating: unzipped_dir/test_dir/
extracting: unzipped_dir/test_dir/renamed_example.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls
Desktop  Downloads  Music  Public  test_dir  unzipped_dir
Documents examples.desktop Pictures Templates test_dir.zip Videos
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls unzipped_dir
test_dir
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ls unzipped_dir/test_dir/
renamed_example.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

5)

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ wget https://example.com/sample.txt
--2025-05-24 19:14:27-- https://example.com/sample.txt
Resolving example.com (example.com)... 23.215.0.138, 23.215.0.136, 23.192.228.80, ...
Connecting to example.com (example.com)|23.215.0.138|:443... connected.
HTTP request sent, awaiting response... 404 Not Found
2025-05-24 19:14:28 ERROR 404: Not Found.

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ wget -O file.txt https://example.com/sample.txt
--2025-05-24 19:14:50-- https://example.com/sample.txt
Resolving example.com (example.com)... 23.215.0.138, 23.192.228.84, 96.7.128.175, ...
Connecting to example.com (example.com)|23.215.0.138|:443... connected.
HTTP request sent, awaiting response... 404 Not Found
2025-05-24 19:14:50 ERROR 404: Not Found.

```

```

~/workspace$ curl -o file.txt https://example.com/
% Total % Received % Xferd Average Speed Time Time Time Current
Dload Upload Total Spent Left Speed
100 1256 100 1256 0 0 7672 0 ---:--:-- ---:--:-- ---:--:-- 7705
~/workspace$ cat file.txt
<!doctype html>
<html>
<head>
  <title>Example Domain</title>

  <meta charset="utf-8" />
  <meta http-equiv="Content-type" content="text/html; charset=utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <style type="text/css">
    body {
      background-color: #f0f0f2;
      margin: 0;
      padding: 0;
      font-family: -apple-system, system-ui, BlinkMacSystemFont, "Segoe UI", "Open Sa
ns", "Helvetica Neue", Helvetica, Arial, sans-serif;

    }
    div {
      width: 600px;
      margin: 5em auto;
      padding: 2em;
      background-color: #fdfdff;
      border-radius: 0.5em;
      box-shadow: 2px 3px 7px 2px rgba(0,0,0,0.02);
    }
    a:link, a:visited {
      color: #38488f;
      text-decoration: none;
    }
    @media (max-width: 700px) {
      div {
        margin: 0 auto;
        width: auto;
      }
    }
  </style>
</head>

<body>
<div>
  <h1>Example Domain</h1>
  <p>This domain is for use in illustrative examples in documents. You may use this
domain in literature without prior coordination or asking for permission.</p>
  <p><a href="https://www.iana.org/domains/example">More information...</a></p>
</div>
</body>
</html>

```



```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ wget --content-on-error -O file.txt https://example.com/sample.txt
--2025-05-24 19:27:57-- https://example.com/sample.txt
Resolving example.com (example.com)... 23.215.0.138, 23.215.0.136, 23.192.228.84, ...
Connecting to example.com (example.com)[23.215.0.138]:443... connected.
HTTP request sent, awaiting response... 404 Not Found
Saving to: 'file.txt'

file.txt                               100%[=====>] 1,23K  --.-KB/s   in 0s

2025-05-24 19:27:58 ERROR 404: Not Found.

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ head -n 15 file.txt
<!doctype html>
<html>
<head>
  <title>Example Domain</title>

  <meta charset="utf-8" />
  <meta http-equiv="Content-type" content="text/html; charset=utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <style type="text/css">
    body {
      background-color: #f0f0f2;
      margin: 0;
      padding: 0;
      font-family: -apple-system, system-ui, BlinkMacSystemFont, "Segoe UI", "Open Sans", "Helvetica N
eue", Helvetica, Arial, sans-serif;

```

Explanation - Wget always looks for a file to download at the specified URL, however at example.com/sample.txt, there is no file to be downloaded. Curl, on the other hand, displays the exact content which is present at the specified URL. Therefore, the html at the given site is displayed. Wget can also be modified to do the same using content-on-error flag.

6)

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test$ touch secure.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test$ chmod 444 secure.txt
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~/test$ ls -al
total 8
drwxrwxr-x  2 onworks onworks 4096 Mai 24 19:38 .
drwxr-xr-x 17 onworks onworks 4096 Mai 24 19:38 ..
-r--r--r--  1 onworks onworks   0 Mai 24 19:38 secure.txt

```

Explanation -

4 - read

2 - write

1 - execute

444 means - read for user, group, and then others

7)

```

onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ export MY_VAR="Hello, Linux!"
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ echo $MY_VAR
Hello, Linux!
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ █

```

Executing \$MY_VAR directly without echo will try to execute as a command. Hence echo is used.