Final Exam

Question 1

```
mthussan@CIS106:~$ git clone https://github.com/linuxworkshop67/rebeccasfiles.git ~/reb
eccasfiles
Cloning into '/home/mthussan/rebeccasfiles'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (12/12), done.
remote: Total 12 (delta 3), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), 111.38 KiB | 2.86 MiB/s, done.
Resolving deltas: 100% (3/3), done.
mthussan@CIS106:~$ mkdir -p ~/Documents/Spring/{CIS160,EN102,MA121}/{Books,Homework,Not
es}
mthussan@CIS106:~$ cd ~/rebeccasfiles
for file in *.pdf; do
  case $file in
    *CIS160*) mv "$file" "${file/CIS160/FundamentalsOfComputerScience}";;
    *EN102*) mv "$file" "${file/EN102/CompositionII}";;
    *MA121*) mv "$file" "${file/MA121/CalculusII}";;
  esac
done
mthussan@CIS106:~/rebeccasfiles$ mv ~/rebeccasfiles/* ~/Documents/Spring/{CIS160,EN102,
MA121}/{Books,Homework,Notes}/
mthussan@CIS106:~/rebeccasfiles$ tree ~/Documents/Spring
/home/mthussan/Documents/Spring
├── CIS160
├── EN102
├── MA121
    └── Notes
```

```
            ├── 1.docx
            ├── 1.pdf
            ├── 2.docx
            ├── 2.pdf
            ├── 3.docx
            ├── 3.pdf
            ├── Books
            ├── Homework
            ├── Notes
            ├── notes1.md
            ├── notes2.md
            └── notes3.md

7 directories, 9 files
mthussan@CIS106:~/rebeccasfiles$ █
```

Question 2

```
mthussan@CIS106:~$ curl https://cis106.com/assets/finalq.2.sh | bash
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 10941  100 10941    0     0  28136      0 --:--:-- --:--:-- --:--:-- 28125
bash: line 1: syntax error near unexpected token `<'
bash: line 1: `<!DOCTYPE html> <html lang="en-US"> <head> <meta charset="UTF-8"> <meta
http-equiv="X-UA-Compatible" content="IE=Edge"> <link rel="stylesheet" href="/assets/cs
s/just-the-docs-default.css"> <script src="/assets/js/vendor/lunr.min.js"></script> <sc
ript src="/assets/js/just-the-docs.js"></script> <meta name="viewport" content="width=d
evice-width, initial-scale=1"> <!-- Begin Jekyll SEO tag v2.8.0 --> <title>Linux Fundam
entals | Here you will find all the information about CIS 106 Linux fundamentals.</titl
e> <meta name="generator" content="Jekyll v3.9.3" /> <meta property="og:title" content=
"Linux Fundamentals" /> <meta property="og:locale" content="en_US" /> <meta name="descr
iption" content="Here you will find all the information about CIS 106 Linux fundamental
s." /> <meta property="og:description" content="Here you will find all the information
about CIS 106 Linux fundamentals." /> <link rel="canonical" href="/404.html" /> <meta p
roperty="og:url" content="/404.html" /> <meta property="og:site_name" content="Linux Fu
ndamentals" /> <meta property="og:type" content="website" /> <meta name="twitter:card"
content="summary" /> <meta property="twitter:title" content="Linux Fundamentals" /> <sc
ript type="application/ld+json"> {"@context":"https://schema.org","@type":"WebPage","de
scription":"Here you will find all the information about CIS 106 Linux fundamentals.","
headline":"Linux Fundamentals","url":"/404.html"}</script> <!-- End Jekyll SEO tag -->
</head> <body> <a class="skip-to-main" href="#main-content">Skip to main content</a> <s
vg xmlns="http://www.w3.org/2000/svg" class="d-none"> <symbol id="svg-link" viewBox="0
0 24 24"> <title>Link</title> <svg xmlns="http://www.w3.org/2000/svg" width="24" height
="24" viewBox="0 0 24 24" fill="none" stroke="currentColor" stroke-width="2" stroke-lin
ecap="round" stroke-linejoin="round" class="feather feather-link"> <path d="M10 13a5 5
0 0 0 7.54.54l3-3a5 5 0 0 0-7.07-7.07l-1.72 1.71"></path><path d="M14 11a5 5 0 0 0-7.54
-.54l-3 3a5 5 0 0 0 7.07 7.07l1.71-1.71"></path> </svg> </symbol> <symbol id="svg-menu"
 viewBox="0 0 24 24"> <title>Menu</title> <svg xmlns="http://www.w3.org/2000/svg" width
="24" height="24" viewBox="0 0 24 24" fill="none" stroke="currentColor" stroke-width="2
" stroke-linecap="round" stroke-linejoin="round" class="feather feather-menu"> <line x1
="3" y1="12" x2="21" y2="12"></line><line x1="3" y1="6" x2="21" y2="6"></line><line x1=
"3" y1="18" x2="21" y2="18"></line> </svg> </symbol> <symbol id="svg-arrow-right" viewB
ox="0 0 24 24"> <title>Expand</title> <svg xmlns="http://www.w3.org/2000/svg" width="24
" height="24" viewBox="0 0 24 24" fill="none" stroke="currentColor" stroke-width="2" st
roke-linecap="round" stroke-linejoin="round" class="feather feather-chevron-right"> <po
lyline points="9 18 15 12 9 6"></polyline> </svg> </symbol> <!-- Feather. MIT License:
https://github.com/feathericons/feather/blob/master/LICENSE --> <symbol id="svg-externa
l-link" width="24" height="24" viewBox="0 0 24 24" fill="none" stroke="currentColor" st
roke-width="2" stroke-linecap="round" stroke-linejoin="round" class="feather feather-ex
ternal-link"> <title id="svg-external-link-title">(external link)</title> <path d="M18
13v6a2 2 0 0 1-2 2H5a2 2 0 0 1-2-2V8a2 2 0 0 1 2-2h6"></path><polyline points="15 3 21
3 21 9"></polyline><line x1="10" y1="14" x2="21" y2="3"></line> </symbol> <symbol id="s
vg-doc" viewBox="0 0 24 24"> <title>Document</title> <svg xmlns="http://www.w3.org/2000
/svg" width="24" height="24" viewBox="0 0 24 24" fill="none" stroke="currentColor" stro
ke-width="2" stroke-linecap="round" stroke-linejoin="round" class="feather feather-file
"> <path d="M13 2H6a2 2 0 0 0-2 2v16a2 2 0 0 0 2 2h12a2 2 0 0 0 2-2V9z"></path><polylin
e points="13 2 13 9 20 9"></polyline> </svg> </symbol> <symbol id="svg-search" viewBox=
"0 0 24 24"> <title>Search</title> <svg xmlns="http://www.w3.org/2000/svg" width="24" h
eight="24" viewBox="0 0 24 24" fill="none" stroke="currentColor" stroke-width="2" strok
e-linecap="round" stroke-linejoin="round" class="feather feather-search"> <circle cx="1
1" cy="11" r="8"></circle><line x1="21" y1="21" x2="16.65" y2="16.65"></line> </svg> </
symbol> <!-- Bootstrap Icons. MIT License: https://github.com/twbs/icons/blob/main/LICE
NSE.md --> <symbol id="svg-copy" viewBox="0 0 16 16"> <title>Copy</title> <svg xmlns="h
ttp://www.w3.org/2000/svg" width="16" height="16" fill="currentColor" class="bi bi-clip
```

```
ass="nav-list-link">Study Guide Final Spring 22</a></li><li class="nav-list-item"><a hr
ef="/guides/Ubuntu-vm-setup/" class="nav-list-link">Ubuntu 20.04 Virtual Machine Setup<
/a></li></ul> <div class="nav-category">Project</div> <ul class="nav-list"><li class="n
av-list-item"><a href="/project/Final_Project/" class="nav-list-link">Final Project Des
cription</a></li><li class="nav-list-item"><a href="/project/sql/" class="nav-list-link
">Install MySQL Ubuntu 22.04</a></li><li class="nav-list-item"><a href="/project/webser
verProject/" class="nav-list-link">Web Server Project Deliverable 2</a></li><li class="
nav-list-item"><a href="/project/Final_project_web_server_port_forwarding%20version/" c
lass="nav-list-link">Web Server Project Deliverable 2 For port forwarding</a></li></ul>
 <div class="nav-category">Extra</div> <ul class="nav-list"><li class="nav-list-item"><
a href="/extra/learning-git/" class="nav-list-link">Learning Git</a></li><li class="nav
-list-item"><a href="/extra/thelinuxfs/" class="nav-list-link">The Linux FS</a></li></u
l> <div class="nav-category">Final_Exam</div> <ul class="nav-list"><li class="nav-list-
item"><a href="/final_exam/final_exam/" class="nav-list-link">Final Assignment</a></li>
</ul> </nav> <footer class="site-footer"> This site uses <a href="https://github.com/ju
st-the-docs/just-the-docs">Just the Docs</a>, a documentation theme for Jekyll. </foote
r> </div> <div class="main" id="top"> <div id="main-header" class="main-header"> <div c
lass="search"> <div class="search-input-wrap"> <input type="text" id="search-input" cla
ss="search-input" tabindex="0" placeholder="Search Linux Fundamentals" aria-label="Sear
ch Linux Fundamentals" autocomplete="off"> <label for="search-input" class="search-labe
l"><svg viewBox="0 0 24 24" class="search-icon"><use xlink:href="#svg-search"></use></s
vg></label> </div> <div id="search-results" class="search-results"></div> </div> </div>
 <div id="main-content-wrap" class="main-content-wrap"> <div id="main-content" class="m
ain-content" role="main"> <style type="text/css" media="screen"> .container { margin: 1
0px auto; max-width: 600px; text-align: center; } h1 { margin: 30px 0; font-size: 4em;
line-height: 1; letter-spacing: -1px; } </style> <div class="container"> <h1> 404 </h1>
 <p><strong>Page not found :(</strong></p> <p>The requested page could not be found.</p
> </div> </div> </div> <div class="search-overlay"></div> </div> </body> </html>'
```

```
mthussan@CIS106:/usr/share$ ls -lSrh /home/mthussan/final_q2/*1*2* | awk '{printf "%-10
s %-3s %-3s %-8s %s\n", $1, $3, $4, $5, $9}' | cut -c 12-
ls: cannot access '/home/mthussan/final_q2/*1*2*': No such file or directory
mthussan@CIS106:/usr/share$ cd
mthussan@CIS106:~$ mkdir ~/all_files_organized
mkdir: cannot create directory '/home/mthussan/all_files_organized': File exists
mthussan@CIS106:~$ cd ~/all_files_organized
mthussan@CIS106:~/all_files_organized$ mkdir -p {documents,pictures,audio,video,program
s}
mthussan@CIS106:~/all_files_organized$ mv /home/mthussan/final_q2/*.{doc,docx,pdf,txt}
~/all_files_organized/documents/
mv: cannot stat '/home/mthussan/final_q2/*.doc': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.docx': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.pdf': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.txt': No such file or directory
mthussan@CIS106:~/all_files_organized$ mv /home/mthussan/final_q2/*.{jpg,jpeg,png,gif}
~/all_files_organized/pictures/
mv: cannot stat '/home/mthussan/final_q2/*.jpg': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.jpeg': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.png': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.gif': No such file or directory
mthussan@CIS106:~/all_files_organized$ mv /home/mthussan/final_q2/*.{mp3,wav} ~/all_fil
es_organized/audio/
mv /home/mthussan/final_q2/*.{mp4,avi,mkv} ~/all_files_organized/video/
mv /home/mthussan/final_q2/*.sh ~/all_files_organized/programs/
mv: cannot stat '/home/mthussan/final_q2/*.mp3': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.wav': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.mp4': No such file or directory
```

```
mv: cannot stat '/home/mthussan/final_q2/*.mp4': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.avi': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.mkv': No such file or directory
mv: cannot stat '/home/mthussan/final_q2/*.sh': No such file or directory
mthussan@CIS106:~/all_files_organized$ ls -RlS --block-size=MB ~/all_files_organized >
~/report.txt
mthussan@CIS106:~/all_files_organized$ cat ~/report.txt
/home/mthussan/all_files_organized:
total 1MB
drwxrwxr-x 2 mthussan mthussan 1MB May  9 18:19 audio
drwxrwxr-x 2 mthussan mthussan 1MB May  9 18:19 documents
drwxrwxr-x 2 mthussan mthussan 1MB May  9 18:19 pictures
drwxrwxr-x 2 mthussan mthussan 1MB May  9 18:19 programs
drwxrwxr-x 2 mthussan mthussan 1MB May  9 18:19 video

/home/mthussan/all_files_organized/audio:
total 0MB

/home/mthussan/all_files_organized/documents:
total 0MB

/home/mthussan/all_files_organized/pictures:
total 0MB

/home/mthussan/all_files_organized/programs:
total 0MB

/home/mthussan/all_files_organized/video:
```

```
/home/mthussan/all_files_organized/video:
total 0MB
mthussan@CIS106:~/all_files_organized$ wc ~/report.txt
 22  63 601 /home/mthussan/report.txt
mthussan@CIS106:~/all_files_organized$ ls -lR | awk '{print $5, $6, $7, $8, $9}' > ~/re
port.txt
mthussan@CIS106:~/all_files_organized$ ls -lR | awk '{print $5, $6, $7, $8, $9}' >> ~/r
eport.txt
mthussan@CIS106:~/all_files_organized$ █
```

Question 3

```
mthussan@CIS106:~$ git clone https://github.com/linuxworkshop67/broken_website.git
Cloning into 'broken_website'...
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 10 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (10/10), 591.03 KiB | 3.86 MiB/s, done.
mthussan@CIS106:~$ mkdir -p broken_website/{css,images,js}
mthussan@CIS106:~$ mv broken_website.css broken_website/css/
mv logo.png broken_website/images/
mv main.js broken_website/js/
mv: cannot stat 'broken_website.css': No such file or directory
mv: cannot stat 'logo.png': No such file or directory
mv: cannot stat 'main.js': No such file or directory
mthussan@CIS106:~$ firefox broken_website/index.html &
[1] 4384
mthussan@CIS106:~$ █
```