

Extra Credit 6: Wildcards

The * (star/asterisk) wildcard:

The screenshot shows two terminal windows side-by-side. The left window (Tilix: aayushmas@Linux: ~) displays the command `ls -1d wildcard_extra_practice` followed by a list of directory entries under `wildcard_extra_practice`, including `wildcard_extra_practice/images/`, `wildcard_extra_practice/nobilitys/`, `wildcard_extra_practice/notifications/`, `wildcard_extra_practice/Offfice365/`, `wildcard_extra_practice/practice_docs/`, `wildcard_extra_practice/scripts/`, `wildcard_extra_practice/tended/`, `wildcard_extra_practice/tows/`, and several document files like `Document.odt`, `Document.pdf`, etc. The right window (Tilix: aayushmas@Linux: ~) shows the creation of a new directory `wildcard_extra_practice/images/` and a listing of its contents, which include images named `img-1.jpg`, `img-1.png`, `img-2.jpg`, `img-2.png`, `img-3.jpg`, and `img-3.png`, along with other files like `instructions_page.html`, `minimalist.webp`, etc. It also shows the use of the `mv` command to rename multiple files in the `images/` directory.

```
1: aayushmas@Linux:~ $ ls -1d wildcard_extra_practice
wildcard_extra_practice
aayushmas@Linux:~ $ ls -1d wildcard_extra_practice/*
wildcard_extra_practice/images/
wildcard_extra_practice/nobilitys/
wildcard_extra_practice/notifications/
wildcard_extra_practice/Offfice365/
wildcard_extra_practice/practice_docs/
wildcard_extra_practice/scripts/
wildcard_extra_practice/tended/
wildcard_extra_practice/tows/
aayushmas@Linux:~ $ ls -1d wildcard_extra_practice/**/*
wildcard_extra_practice/images/jpg
wildcard_extra_practice/images/png
wildcard_extra_practice/images/webp
wildcard_extra_practice/Offfice365/Galsworthys.docx
wildcard_extra_practice/Offfice365/interned.docx
wildcard_extra_practice/Offfice365/New.docx
wildcard_extra_practice/Offfice365/New.pptx
wildcard_extra_practice/Offfice365/New.vsdx
wildcard_extra_practice/Offfice365/New.xlsx
aayushmas@Linux:~ $ mv wildcard_extra_practice/*.* ~/wildcard_extra_practice/scripts/
aayushmas@Linux:~ $ ls ~/wildcard_extra_practice/scripts/
backup.sh    program.sh   short.sh    Wesak.sh
downloader.sh reanimates.sh skeddaddle.sh
gibbering.sh schnapps.sh strengths.sh
aayushmas@Linux:~ $
```

```
aayushmas@Linux:~ $ mkdir wildcard_extra_practice/images/
aayushmas@Linux:~ $ ls wildcard_extra_practice/
Document.odt  index_page.html      request.json
Document.pdf  insert_page.html    response.json
images        instructions_page.html scampi.pdf
img-1.jpg     minimalist.webp    scripts
img-1.png     nobilitys          tangerines.pdf
img-2.jpg     notifications       tended
img-2.png     Offfice365          tows
img-3.jpg     practice_docs      prefer.txt
img-3.png
aayushmas@Linux:~ $ ls wildcard_extra_practice/img*.*
wildcard_extra_practice/img-1.jpg
wildcard_extra_practice/img-1.png
wildcard_extra_practice/img-2.jpg
wildcard_extra_practice/img-2.png
wildcard_extra_practice/img-3.jpg
wildcard_extra_practice/img-3.png
aayushmas@Linux:~ $ mv -v wildcard_extra_practice/img*.* wildcard_extra_practice/images/
renamed 'wildcard_extra_practice/img-1.jpg' -> 'wildcard_extra_practice/images/img-1.jpg'
renamed 'wildcard_extra_practice/img-1.png' -> 'wildcard_extra_practice/images/img-1.png'
renamed 'wildcard_extra_practice/img-2.jpg' -> 'wildcard_extra_practice/images/img-2.jpg'
renamed 'wildcard_extra_practice/img-2.png' -> 'wildcard_extra_practice/images/img-2.png'
renamed 'wildcard_extra_practice/img-3.jpg' -> 'wildcard_extra_practice/images/img-3.jpg'
renamed 'wildcard_extra_practice/img-3.png' -> 'wildcard_extra_practice/images/img-3.png'
aayushmas@Linux:~ $
```

The ? (question mark) wildcard:

```
1/1 + ⌂ ⌂ Tilix: aayushmas@Linux: ~/wildcard_extra_practice Q - x
1: aayushmas@Linux: ~/wildcard_extra_practice ▼
aayushmas@Linux:~$ cd ~/wildcard_extra_practice/
aayushmas@Linux:~/wildcard_extra_practice$ ls *.*???
index_page.html    instructions_page.html    request.json
insert_page.html   minimalist.webp        response.json
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X i*.*???
index_page.html
insert_page.html
instructions_page.html
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X *.???x
ls: cannot access '*.???x': No such file or directory
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X *.???x
Galsworthys.docx
interned.docx
New.docx
New.pptx
New.vsdx
New.xlsx
aayushmas@Linux:~/wildcard_extra_practice$ █
```

The [] (square brackets) wildcard:

```
1/1 + ⌂ ⌂ Tilix: aayushmas@Linux: ~/wildcard_extra_practice - x
1: aayushmas@Linux: ~/wildcard_extra_practice
aayushmas@Linux:~/wildcard_extra_practice$ cd wildcard_extra_practice/
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X [A-Z]*
Galsworthys.docx
New.docx
Document.odt
Document.pdf
New.pptx
Wesak.sh
New.vsdx
New.xlsx
aayushmas@Linux:~/wildcard_extra_practice$ ls *[0-9]*
img-1.jpg img-1.png img-2.jpg img-2.png img-3.jpg img-3.png
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X *[0-9]*
img-1.jpg
img-2.jpg
img-3.jpg
img-1.png
img-2.png
img-3.png
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X [A-z]*.??
backup.sh
downloader.sh
gibbering.sh
program.sh
reanimates.sh
schnapps.sh
short.sh
skedaddle.sh
strengths.sh
Wesak.sh
aayushmas@Linux:~/wildcard_extra_practice$ ls -1X *[:punct:]*.?????
index_page.html
insert_page.html
instructions_page.html
aayushmas@Linux:~/wildcard_extra_practice$
```

Brace Expansion {}:

The screenshot shows a terminal window with four panes, each displaying a command-line session. The background of the terminal is a dark image of Earth.

- Panels 1 and 2:** Show the creation of a directory structure. Panel 1 shows creating a 'playground' directory and files 'about.html', 'contact.html', 'index.html', and 'file1..10.txt'. Panel 2 shows creating a 'website' directory and its sub-directories: 'assets', 'audio', 'extras', 'docs', 'helper', 'scripts', 'js', and 'python'. The total output is 11 directories and 13 files.
- Panels 3 and 4:** Show the creation of files from 'fileA..Z.txt' and their removal. Panel 3 shows creating files from 'fileA..Z.txt' and listing them. Panel 4 shows removing files from 'fileA..Z.txt' and listing the remaining files.

Challenge Practice 1:

```
1/1 ▾ + ⌂ ↻ Tilix: aayushmas@Linux: ~ Q ⌂ - ⌂ ×
1: aayushmas@Linux: ~ ▾
aayushmas@Linux:~$ mkdir ~/wildcard_extra_practice/Offffice365
aayushmas@Linux:~$ ls wildcard_extra_practice/
backup.sh          img-3.png           program.sh
Document.odt       index_page.html    reanimates.sh
Document.pdf       insert_page.html   request.json
downloader.sh      instructions_page.html response.json
File01.py          interned.docx     scampi.pdf
File02.py          minimalist.webp   schnapps.sh
File03.py          New.docx          scripts
Galsworthys.docx  New.pptx           short.sh
gibbering.sh       New.vsdx          skedaddle.sh
img-1.jpg          New.xlsx          strengths.sh
img-1.png          nobilitys        tangerines.pdf
img-2.jpg          notifications    tended
img-2.png          Offffice365     tows
img-3.jpg          prefer.txt       Wesak.sh
aayushmas@Linux:~$ ls wildcard_extra_practice/*.*x
wildcard_extra_practice/Galsworthys.docx
wildcard_extra_practice/interned.docx
wildcard_extra_practice/New.docx
wildcard_extra_practice/New.pptx
wildcard_extra_practice/New.vsdx
wildcard_extra_practice/New.xlsx
aayushmas@Linux:~$ mv wildcard_extra_practice/*.*x wildcard_extra_practice/Offffice365/
aayushmas@Linux:~$
```

Challenge Practice 2:

```
1/1 + ⌂ ⌂ Tilix: aayushmas@Linux: ~/wildcard_extra_practice Q - x
1: aayushmas@Linux: ~/wildcard_extra_practice ~
aayushmas@Linux:~$ cd ~/wildcard_extra_practice/
aayushmas@Linux:~/wildcard_extra_practice$ ls
backup.sh    img-1.jpg      instructions_page.html  request.json  tangerines.pdf
Document.odt   img-1.png      minimalist.webp       response.json tended
Document.pdf   img-2.jpg      nobilitys            scampi.pdf    tows
downloader.sh  img-2.png      notifications        schnapps.sh Wesak.sh
File01.py     img-3.jpg      Offfce365           scripts      .
File02.py     img-3.png      prefer.txt          short.sh
File03.py     index_page.html program.sh          skedaddle.sh
gibbering.sh  insert_page.html reanimates.sh    strengths.sh
aayushmas@Linux:~/wildcard_extra_practice$ rm *[0-9][0-9].*
aayushmas@Linux:~/wildcard_extra_practice$ ls
backup.sh    img-2.jpg      minimalist.webp       request.json  strengths.sh
Document.odt   img-2.png      nobilitys            response.json tangerines.pdf
Document.pdf   img-3.jpg      notifications        scampi.pdf    tended
downloader.sh  img-3.png      Offfce365           scripts      tows
gibbering.sh  index_page.html prefer.txt          short.sh
img-1.jpg      insert_page.html reanimates.sh    skedaddle.sh
img-1.png      instructions_page.html
aayushmas@Linux:~/wildcard_extra_practice$ mkdir practice_docs
aayushmas@Linux:~/wildcard_extra_practice$ mkdir -v *.html *.pdf *.odt practice_docs/
mkdir: cannot create directory 'index_page.html': File exists
mkdir: cannot create directory 'insert_page.html': File exists
mkdir: cannot create directory 'instructions_page.html': File exists
mkdir: cannot create directory 'Document.pdf': File exists
mkdir: cannot create directory 'scampi.pdf': File exists
mkdir: cannot create directory 'tangerines.pdf': File exists
mkdir: cannot create directory 'Document.odt': File exists
mkdir: cannot create directory 'practice_docs/': File exists
aayushmas@Linux:~/wildcard_extra_practice$
```

Challenge Practice 3:

```
1 / 1 + ⌂ ⌂ Tilix: aayushmas@Linux: ~/wildcard_extra_practice Q - x
1: aayushmas@Linux: ~/wildcard_extra_practice ▾
aayushmas@Linux:~/wildcard_extra_practice$ ls
backup.sh      img-2.jpg      minimalist.webp  reanimates.sh  skedaddle.sh
Document.odt    img-2.png      nobilitys       request.json   strengths.sh
Document.pdf    img-3.jpg      notifications  response.json tangerines.pdf
downloader.sh   img-3.png      Offfice365     scampi.pdf    tended
gibbering.sh   index_page.html practice_docs  prefer.txt    schnapps.sh
img-1.jpg       insert_page.html prefer.txt    program.sh   scripts
img-1.png       instructions_page.html  short.sh
aayushmas@Linux:~/wildcard_extra_practice$ ls *.{jpg,png}
img-1.jpg  img-1.png  img-2.jpg  img-2.png  img-3.jpg  img-3.png
aayushmas@Linux:~/wildcard_extra_practice$ ls *.{jpg,png,webp}
img-1.jpg  img-1.png  img-2.jpg  img-2.png  img-3.jpg  img-3.png  minimalist.webp
aayushmas@Linux:~/wildcard_extra_practice$ cp *.{jpg,png,webp} images
cp: target 'images': No such file or directory
aayushmas@Linux:~/wildcard_extra_practice$ cp *.{jpg,png,webp} images/
cp: target 'images/': No such file or directory
aayushmas@Linux:~/wildcard_extra_practice$ mkdir images
aayushmas@Linux:~/wildcard_extra_practice$ cp *.{jpg,png,webp} images/
aayushmas@Linux:~/wildcard_extra_practice$ ls images/
img-1.jpg  img-1.png  img-2.jpg  img-2.png  img-3.jpg  img-3.png  minimalist.webp
aayushmas@Linux:~/wildcard_extra_practice$ mkdir images/{jpg,png,webp}
aayushmas@Linux:~/wildcard_extra_practice$ mv images/*.jpg images/jpg
aayushmas@Linux:~/wildcard_extra_practice$ mv images/*.png images/png
aayushmas@Linux:~/wildcard_extra_practice$ mv -v images/*.webp images/webp
renamed 'images/minimalist.webp' -> 'images/webp/minimalist.webp'
aayushmas@Linux:~/wildcard_extra_practice$ tree images/
images/
└── jpg
    ├── img-1.jpg
    ├── img-2.jpg
    └── img-3.jpg
└── png
    ├── img-1.png
    ├── img-2.png
    └── img-3.png
└── webp
    └── minimalist.webp

4 directories, 7 files
aayushmas@Linux:~/wildcard_extra_practice$
```