Week Report 6

Wildcards

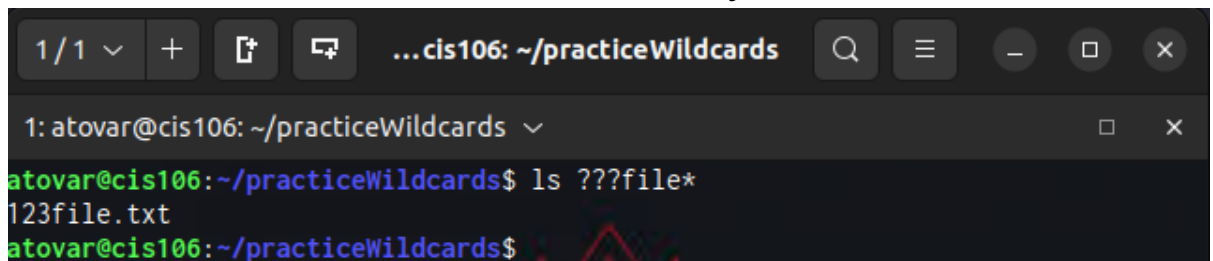### * Wildcard

The * wildcard matches from 0 to any number of characters.

- Example:
    - List all the text file in a directory
        - 'ls *.txt'
    - List all the files that start with the word file
        - 'ls file*'
    - Copy all the mp4 files
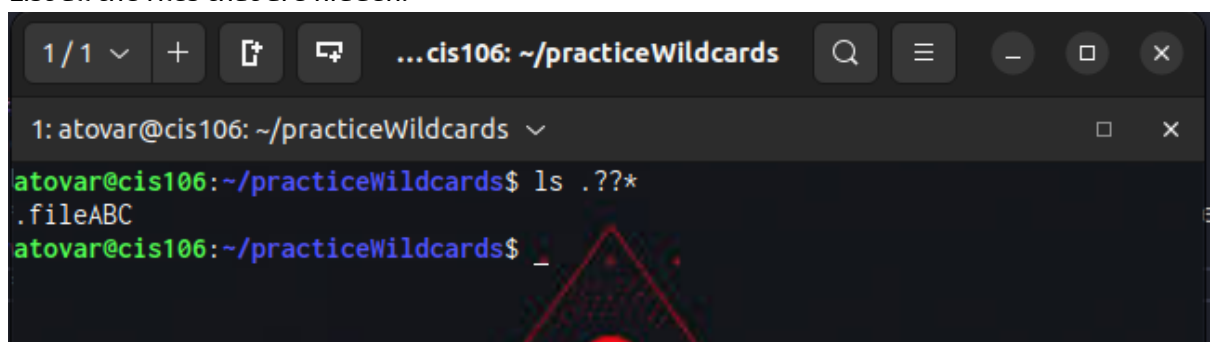   - 'cp Downloads/*.mp4 ~/Videos/Movies/'

? Wildcard

The ? wildcard matches a single character

- Examples:
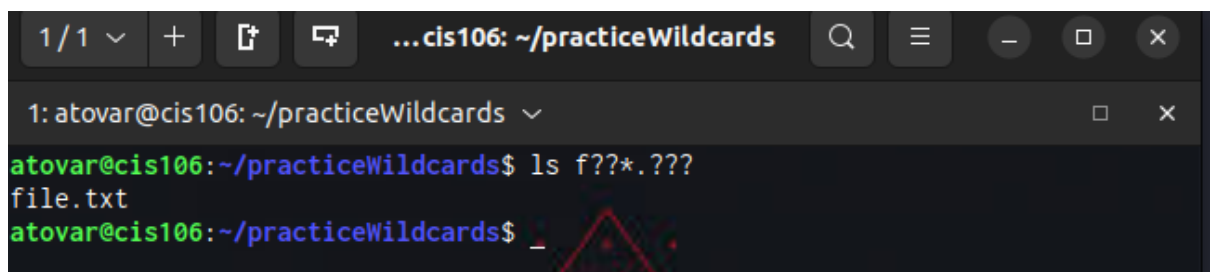   - List all the files that have 3 characters and are followed by the word file in the name

    - List all the files that are hidden.

    - List all the files that start with letter f

[] Wildcard

The [] wildcard matches a single character in a range

- Examples:
  - List all the files that start with a lowercase letter and have a 3 letter file extension

    ```
    1/1 ∨   +   ☐   ☐   ...   cis106: ~/wildcardpractice   Q  ≡   —  ☐  ✕

    1: atovar@cis106: ~/wildcardpractice ∨                        ☐  ✕

    atovar@cis106:~/wildcardpractice$ ls [a-z]*.???
    apple.txt  banana.txt  grapes.txt  orange.txt  pear.txt
    atovar@cis106:~/wildcardpractice$ _
    ```

  - List all the files that start with an uppercase character and have a number in the name
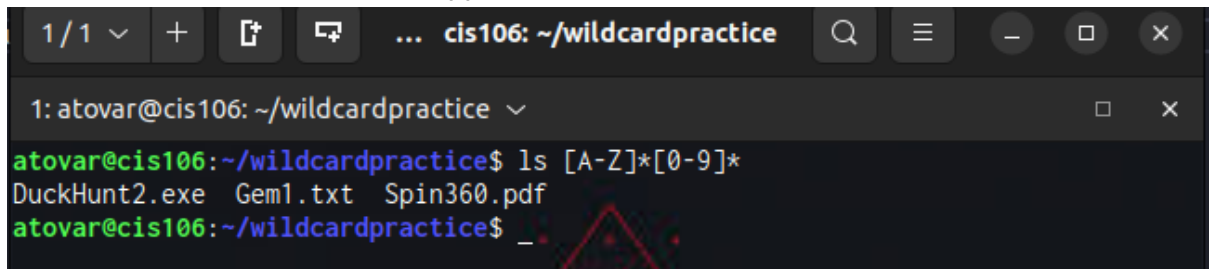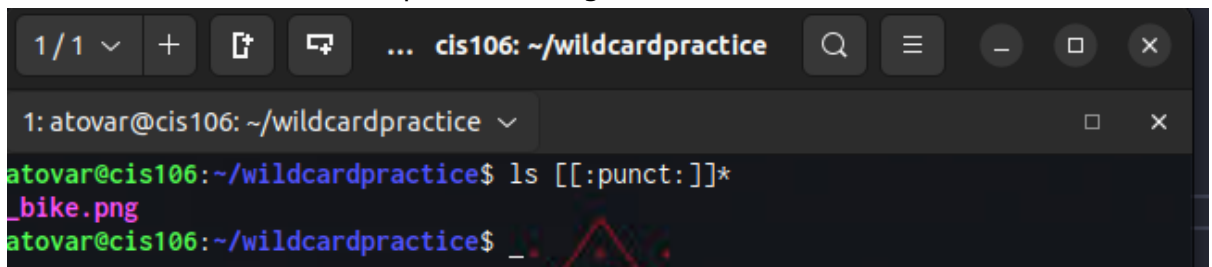
    ```
    1/1 ∨   +   ☐   ☐   ...   cis106: ~/wildcardpractice   Q  ≡   —  ☐  ✕

    1: atovar@cis106: ~/wildcardpractice ∨                        ☐  ✕

    atovar@cis106:~/wildcardpractice$ ls [A-Z]*[0-9]*
    DuckHunt2.exe  Gem1.txt  Spin360.pdf
    atovar@cis106:~/wildcardpractice$ _
    ```

  - List all the file that start with a punctuation sign

    ```
    1/1 ∨   +   ☐   ☐   ...   cis106: ~/wildcardpractice   Q  ≡   —  ☐  ✕

    1: atovar@cis106: ~/wildcardpractice ∨                        ☐  ✕

    atovar@cis106:~/wildcardpractice$ ls [[:punct:]]*
    _bike.png
    atovar@cis106:~/wildcardpractice$ _
    ```

Brace Expansion

{} is not a wildcard but another feature of bash that allows you to generate arbitrary strings to use with commands

Practice

- Examples:

- To create a whole directory structure in a single command

```
1/1 ∨   +   ⌷   ⌷

1: atovar@cis106: ~/music ∨

atovar@cis106:~$ cd music/
atovar@cis106:~/music$ tree                    3 / 4
.
├── jazz
│   ├── mp3files
│   │   ├── new1
│   │   ├── new2
│   │   └── new3
│   ├── oggfiles
│   │   ├── new1
│   │   ├── new2
│   │   └── new3
│   └── videos
│       ├── new1
│       ├── new2
│       └── new3
└── rock
    ├── mp3files
    │   ├── new1
    │   ├── new2
    │   └── new3
    ├── oggfiles
    │   ├── new1
    │   ├── new2
    │   └── new3
    └── videos
        ├── new1
        ├── new2
        └── new3

atovar@cis106:~/music$ mkdir -p music/{jazz,rock}/{mp3files,videos,oggfiles}/new{1..3}_
```

- To create a N number of files use

```
1: atovar@cis106: ~/music ∨

atovar@cis106:~/music$ website{1..5}.html
website1.html: command not found
atovar@cis106:~/music$ touch website{1..5}.html
atovar@cis106:~/music$ tree
.
├── jazz
│   ├── mp3files
│   │   ├── new1
│   │   ├── new2
│   │   └── new3
│   ├── oggfiles
│   │   ├── new1
│   │   ├── new2
│   │   └── new3
│   └── videos
│       ├── new1
│       ├── new2
│       └── new3
├── rock
│   ├── mp3files
│   │   ├── new1
│   │   ├── new2
│   │   └── new3
│   ├── oggfiles
│   │   ├── new1
│   │   ├── new2
│   │   └── new3
│   └── videos
│       ├── new1
│       ├── new2
│       └── new3
├── website1.html
├── website2.html
├── website3.html
├── website4.html
└── website5.html

26 directories, 5 files
atovar@cis106:~/music$ _
```

- Remove multiple files in a single directory

```
1/1 ∨   +   ⏻   ⊡          Tilix: atovar@cis106: ~          🔍  ≡  —  ▢  ✕

1: atovar@cis106: ~ ∨                                              ▢   ✕

atovar@cis106:~/music$ cd
atovar@cis106:~$ rm -r music/{jazz,rock}/{mp3files,videos,oggfiles}/new{1..3}
atovar@cis106:~$ _
```