

CIS241

System-Level Programming and Utilities

grep and wildcards

Erik Fredericks, frederer@gvsu.edu

Fall 2025

Based on material provided by Erin Carrier, Austin Ferguson, and Katherine Bowers

grep - pattern-matching search/filter

Usage: `grep string filename`

Common options:

- `-w`: Search only whole words
 - Removes partial matches, `-w abc` does not match `abcdef`
- `-r`: recursive (search files in directory)
- `-i`: ignore case
- `-n`: print line number

More with regex (later)

Wildcards

Probably have talked about these already, but formally...

Pattern matching for filenames!

- `*` - matches any number of characters
 - `ls *.txt`
- `?` - matches any single character
 - `ls data_?.csv`
 - Matches `data_7.csv` but not `data_17.csv`

Wildcards

- `[]` - character class or range
 - `[abc]`, `[a-z]`, `[:upper:]`, etc...
 - Note the range is **per character**
 - `[!a]` for complement
 - `ls [[:upper:]]*`
- This is all called globbing!
 - `man 7 glob`

<https://tldp.org/LDP/abs/html/globbingref.html>

Some practice!

Pop open the manual on `glob` --> `man glob`

- Remember, `q` gets you out of it

Oh no we have some things to look for!

Some practice - search for the following phrases

- Search for: `save processing time`
 - `man glob | grep "save processing time"`
- Search for: `all uppercase words`
 - `man glob | grep "[[:upper:]]"`
- Search for `glob()`
 - `man glob | grep "glob()"`

More practice!

Create a temporary directory

- `mkdir temp`
- `cd temp`

Create some files in it

```
for i in {1..200}
do
    touch "file_$i"
done
```

`ls`

More practice!

List all files that start with `f`:

- `ls f*`

List all files that start with `file_50`:

- `ls file_50*`

List all files in the range of 5-99:

- Oops need **brace expansion** -- only 1 character handled at a time
- `ls file_{[5-9],[1-9][0-9]}`
 - This says, either file 5-9, or file 10-99