SED

OVERVIEW

- sed = stream editor
- used to edit files
- general form:

```
sed [options] '/pattern/ command'
input_file
sed [options] 'range command'
input_file
```

HELPFUL OPTIONS

- `-E` -> use extended regular expression
- `-f program_filename` -> read sed commands from file named `program_filename`
- `--in-place[=suffix]` -> modify file in place, optionally give suffix to create backup file with suffix extension

COMMON USES

- Deleting lines:
  - `sed -E '/^Totals.*/ d'`
  - `sed '4 d'`
  - `sed '1,4 d'`
- `$` in range form = end of file

COMMON USES (CONT.)

- Substituting Text:
  - `sed -E 's/pattern_to_match/replace_with/'`
  - `sed -E 's/ *$//' filename`

MORE SED SUBSTITUTION

- default: only replaces 1st occurence of pattern on each line
- can specify to replace others:
    - replace all occurrences
      ```
      sed -E 's/pattern_to_match/replace_with/g' fname.txt
      ```

    - replace certain occurence
      ```
      sed -E 's/pattern_to_match/replace_with/2' fname.txt
      ```

MORE SED SUBSTITUTION

- combine line range with substition
  ```
  sed '1,3
  s/pattern_to_match/replace_with/'
  fname.txt
  ```

- use matched pattern (or subexpression) in
  `replace_with`

  - `\1`, `\2`, ... refer to sub-expressions grouped in
    parentheses
  - `&` -> entire pattern matched