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CSE 130  
Homework 1

### Design Document

Takes in arguments from CLI : Usage e.g./shoulder 10 file1 file2 file3

main(argc, argv):

- Store the program name as prog\_name from argv1

- If no other argv:

  - Show error msg for usage

    - shoulders: requires an argument*

  - Exit program

- Else:

  - Check for argv2 (line number digit)

    - Store argv2 as line\_input

    - If line\_input == "-qn"

      - Print error message

      - shoulders: option requires an argument -- 'n'*

      - Try 'shoulders --help' for more information.

    - Else If line\_input !isDigit || line\_input < 0:

      - Generate exception msg similar to head.

      - use *fprintf(3)* :

        - prog\_name: invalid number of lines: 'argv2'.*

    - Else: (If argv2 is a non negative Digit)

      - Check argv3 for file

- Create a buffer which holds 1,000 – 10,000 char.

- If no argv3 exist:

  - loop through i in range(0,line\_input):

    - Use stdin to feed into buffer.

    - Upon enter (newline), stdout the buffer.

- Else While more argv3+ exist (files):

  - If argv3 == '-':

    - loop through i in range(0,line\_input):

Use stdin to feed into buffer.

Upon enter (newline), stdout the buffer.

Attempt to open() file name

If error occurs aka file not found, generate std error msg similar to head

Using `warn(3)` :

*prog\_name: cannot open 'myfile' for reading: No such file or directory*

Else file exists:

Buffer(file, line\_input)

Continue to check for more argv's (aka files)

If no more parameters exist, exit program

parameters: file, line\_input

Fills buffer from file

Empties buffer to stdout

if line\_input > file newline, print entire file contents

Buffer(file, line\_input):

Loop through the file contents of current line char by char.

When a \n is fed into buffer

write out the buffer contents to stdout

clear buffer using `memset`

advance to next line