Design Document

Rishab Jain
CruzID: rjain9

CSE:130, Fall 2019

1   Goal

The goal of this program is to mimic the functionality of cat command from Unix systems. The program should behave exactly like the cat command.

2   Assumptions

Assume that all functionality should be exactly like the cat command in Unix and we don't need support for any flags. All error messages should also be exactly like the cat command would be. Also since we're creating a fixed sized buffer, I am assuming that the file won't be too big for the program to handle.

3   Design

The general design of my program is to create two while loops. The outer while loop will go through each argument in the command line, and the second will use read() to go through each file and write the output to the standard output. In the second while loop which will be nested in the outer while loop, it will also check if a "-" or directory is passed in the command line. If it;s a "-" then the program will read from the standard input and if a directory is passed then it will print out the correct error message.

4 Pseudocode

Declare buffer with size 32
If only one argument in argv[] array
- Read from standard input
Else
- While arguments still left in array:
    - If "-" is in argv[]
        - Read from standard input
    - Else
        - Open file from argv[]
        - If file doesnt exist:
            - Print error message
        - Else if argv[] is a directory
            - Display proper error message using warnx()
        - Else

- Use read() to write to standard output and if error print using perror()
- Close file