

Design Document: Simple *cat*

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1 Goals

The goal of this programming assignment is to write a program, *dog*, with similar functionality as the unix command *cat*. We do not need to handle any flags but we will need to handle single dashes, invalid inputs, and as many input files as given. If an input is invalid, an error message should be given and the program should continue regardless.

2 Design

The design is all encapsulated in the original main function. The handling is split between between cases based on the `arg_count`

```
INPUT : Argument count: arg_count
INPUT : Array of arguments: arguments
OUTPUT : Standard Output

1. Create buffer of size BUFFER_SIZE
2. If arg_count == 1 then
    a. While read return value > 0 then
        i. Write to standard output
    b. end
3. end
4. Else if arg_count >= 2 then
    a. For all args i in arguments above 0
        i. If arguments[i] is dash then
            1. While read return value > 0 then
                a. Write to standard output
            2. end
        ii. end
        iii. Open arg at arguments[i]
        iv. If can't open arg then
            1. Send error message and continue
        v. end
        vi. Read from arg
        vii. If can't read arg then
            1. Send error message and continue
```

```

            viii. end
            ix. While read return value > 0 then
                  1. Write to standard output
            x. end
            xi. Close file
    b. end
5. end
```

Algorithm 1: Handling files and standard input to standard output