Design Document - Assignment 0

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1 Goal

The goal of this assignment is to replicate the cat command on the terminal but instead we are making dog to not get confused on testing output.

2 Assumptions

We are assuming that this code will be run on Ubuntu 18.04 VM. So, this code may not work if it were to run on a Mac or Windows system.

3 Design

My approach to this problem starts with the case if there are not any arguments we will simply just take standard input and print it to the standard output until an EOF is detected. Then there must be an argument, so reading each argument word by word to determine the different cases for cat. Each argument could be either: a ”-” which reads standard input and writes standard output until an EOF is detected, open a file name in the current directory and print the file contents onto the terminal, and warn the user when a folder or bad file is trying to be open or read.

4 Pseudocode

Assuming we pass in arg[] array filled with the file names and argCount which is arg.size().

```
if only arg[0] then
    read(stdin);
    write(stdout);
end
counter=1;
while counter < argCount do
    if arg[counter] == '-' then
        read(stdin);
        write(stdout);
        ++counter;
        continue;
    end
    if arg[counter] does not open then
        bad file error;
        ++counter;
        continue;
    end
    read(arg[counter]);
    write(arg[counter]);
    ++counter;
end
```

Algorithm 1: Dog Command