Design Document: mycat

Yujia Li
CruzID: yli302

1 Goals

The `mycat` is a program which has basic functions of linux version `cat`. The `mycat` needs to read buffer from files and show these contents of these files on the terminal. When file which asked does not exist or it is a directory, program will print an error and skip this file.

2 Design

We have no more than 64 Kib for user data:

64KiB = 2^{16} B, so we `#define BUFFER_SIZE 65536`,

and need a `char arr[BUFFER_SIZE]` to store buffer for user data.

Input: Argument count: `arg_count`
Input: Array of arguments: `arguments.`
Output:

1. Standard output of user data.
2. Error 1: When the argument is a directory, print
   `"cat: argv[i]: Is a directory"`
3. Error 2: When the argument is not exist, print
   `"cat: argv[i]: No such file or directory"`
4. Error 3: When do not have read permission to argument, print
   `"cat: argv[i]: Permission denied"`

```
if arg_count is 1 then
     // input is standard in
     while(true)
          count = read(stdin);
          if stdin is a directory then
               Print"cat: -: Is a directory";
          end
          if (count == 0)
               break;
          end
          write(stdout);
     end
else
```

```
    // input are file names.
    for i←1 to arg_count  do
        open(argv[i]);
        if argv[i] not exist then
            print”cat: argv[i]: No such file or directory”;
        else
            while(true)
                count = read(file descriptor);
                if argv[i] is a directory then
                    print”cat: argv[i]: Is a directory”;
                end
                if (count == 0)
                    break;
                end
                write(stdout);
            end
        end
    end
end
```