Design Document: Dog

Aaron Nguyen
CruzID: anguy200

1 Goals

The goal of this program is to perform functionality similar to cat a built in linux command . Unlike cat if a -(dash) is given as a filename standard input is used for that file, but that means only one file can be named - (dash) and be given to the program.

2 Design

For this program there will be two parts. The first part takes in the file or files and parses it. The second part will recombine the data from parsing the files into the stdout that is given at the end.

2.1 Handling Arguments and Files

For this program dog, dog must be arg[0] before any file names. This checks if the function is actually being called and afterwards if it is true all subsequent file names are taken in. To determine the number of files give it would be the length of args minus one. After taking in the files, the files need to be parsed and be stored until all files have been parsed. To do this a malloc of up to 32 Kib can be used to store the data. After storing the data the second function is called to print the data.

```
#Input: file names
#Output: data found in each file
For length of args
    if filename == -
        take stdin
        Print stdout()
    While file is not empty
        Read file
Call second function
```

2.2 Recombing and Printing Data to Stdout

Due to all the data being stored in a heap. All that needs to be done is to pass the heap into a print function. Which will take each string and print it to the stdout

```
Printfile
```

```
While (heap != empty)
If not valid
     Return -1
while string is not empty
     print
return 1
free heap
```