

OS Problem Set 1 - problem 3

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Text files used for testing were submitted and are called: **hak_email1.txt** (contains 5224 bytes) and **hak_email2.txt** (contains 5542 bytes)

The binary file used to test was the **a.out** executable.

Examples are shown as screenshots.

Test case 1:

We concatenated hak_email1.txt, two standard inputs, and hak_email2.txt

```
phil@phil-VirtualBox:~$ gcc kitty.c
phil@phil-VirtualBox:~$ ./a.out hak_email1.txt - - hak_email2.txt
```

Test case 2:

We concatenated hak_email1.txt, two standard inputs, and hak_email2.txt to an output file name test2.txt

```
phil@phil-VirtualBox:~$ ./a.out -o test2 hak_email1.txt - - hak_email2.txt
Name of of file concatenated: hak_email1.txt
Number of bytes: 5224
Number of reads: 3
Number of writes: 2
TEST
Name of of file concatenated: <standard input>
Number of bytes: 5
Number of reads: 2
Number of writes: 1
TEST
Name of of file concatenated: <standard input>
Number of bytes: 5
Number of reads: 2
Number of writes: 1
Name of of file concatenated: hak_email2.txt
Number of bytes: 5542
Number of reads: 3
Number of writes: 2
```

The program returns the bytes read and the count of reads and write calls.

The test2 file should be provided in the submission folder.

Test case 3:

Here a file that doesn't exist (lol.txt) was added. As seen in the screenshot below the program sees that lol.txt does not exist and outputs the appropriate error messages.

```
phil@phil-VirtualBox:~$ ./a.out lol.txt
Can't open file lol.txt for reading
Error Number 2
OH NO! ERROR: No such file or directory
```

Test case 4:

Here an output file is not given. As seen below, the appropriate error message is displayed.

```
phil@phil-VirtualBox:~$ ./a.out -o
Output file not given
Error Number 14
OH NO! ERROR: Bad address
```

Test case 5:

We concatenated a.out to an output file named test3. As seen the program catches that it is a binary file and gives a warning. Then to check that the if the file was properly concatenated the diff command was used to check if a.out was the same as test3 and as seen in the second screen shot they are the same.

```
phil@phil-VirtualBox:~$ ./a.out -o test3 a.out
WARNING: File a.out is binary or has binary elements in it!
Name of of file concatenated: a.out
Number of bytes: 17328
Number of reads: 6
Number of writes: 5
```

```
phil@phil-VirtualBox:~$ diff test3 a.out
phil@phil-VirtualBox:~$
```

Test case 6:

We concatenated a.out, hak_email1.txt, standard input and a.out to an output file.

The program detects the binary file, a.out and then gives a warning.

```
phil@phil-VirtualBox:~$ ./a.out -o test4 a.out hak_email1.txt - a.out
WARNING: File a.out is binary or has binary elements in it!
Name of of file concatenated: a.out
Number of bytes: 17328
Number of reads: 6
Number of writes: 5
Name of of file concatenated: hak_email1.txt
Number of bytes: 5224
Number of reads: 3
Number of writes: 2
TEST
Name of of file concatenated: <standard input>
Number of bytes: 5
Number of reads: 2
Number of writes: 1
WARNING: File a.out is binary or has binary elements in it!
Name of of file concatenated: a.out
Number of bytes: 17328
Number of reads: 6
Number of writes: 5
```