

Assignment 2B – Buffered I/O

Description:

We are adding our own code to our Professors buffered i/o system, we only had to do `b_close()`, `b_open` and `b_read()`. This code is taking a desired bytes to be read from a user and outputs those bytes from buffer to user.

Example: User is asking for 80 bytes our code would output 80 bytes from our buffer and whatever is stored in that buffer.

Approach / What I Did:

My approach to solving this code was to look into readme carefully. Once I read the README I found out that we don't even need to read using linux commands . All we had to do is use give functions such as `LBaread` which would output whatever is in our buffer at certain location. First I did not understand the code , because the names were sort of misleading especially for arguments in `LBaread`. In my `b_read` function I decided to check for what user is asking and that's the place I decide to `malloc` my memory, because doing it in our first call with file descriptor makes no sense.

Issues and Resolutions:

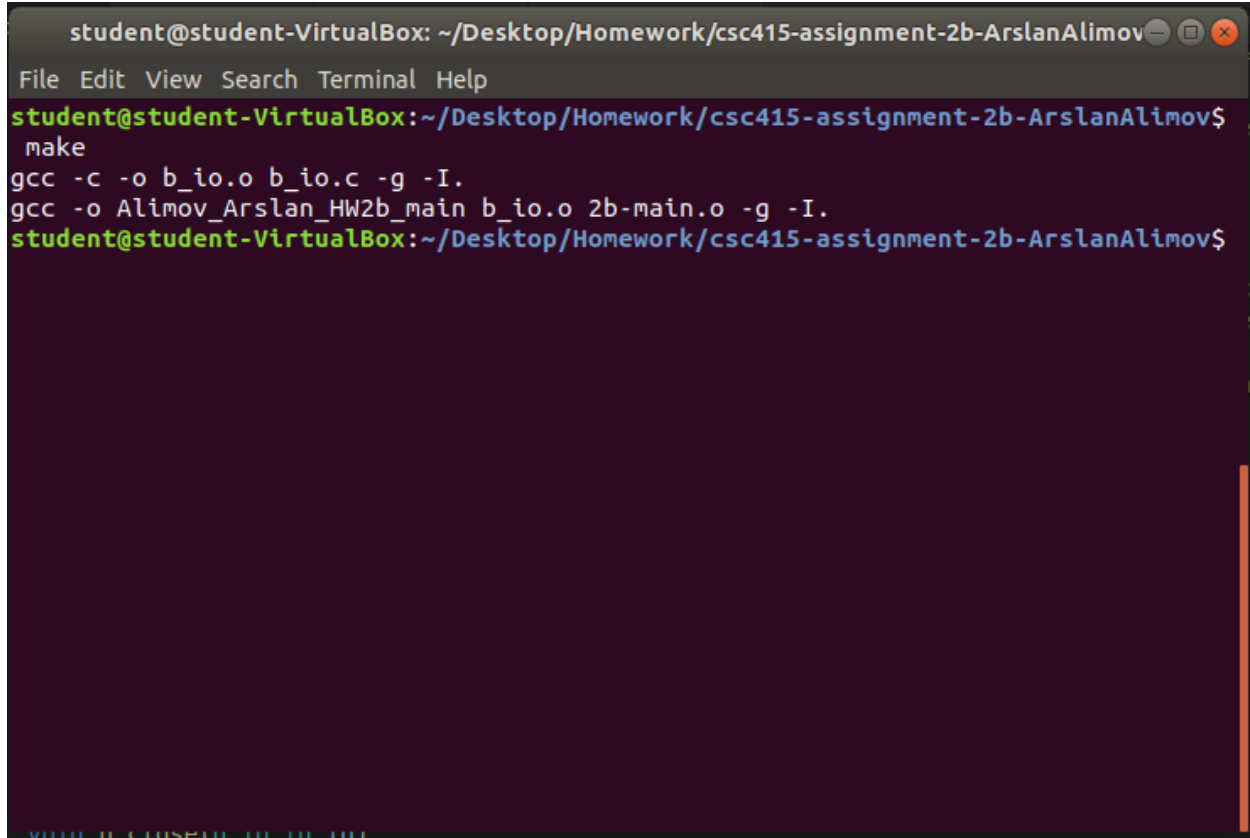
There were multiple issues that I faced – first I forgot that we can't simply assign a structure to something and then call it . It caused a repetition of same blockoffset. Which cause me to spend more time on my code than I needed to.

Another issue I faced was with `lba read` where I would not understand what each argument means, I also would increase the chunk size ignoring that it is always = 1.

Analysis: (If required for the assignment)

NO analysis for this assignment

Screen shot of compilation:



```
student@student-VirtualBox: ~/Desktop/Homework/csc415-assignment-2b-ArslanAlimov
File Edit View Search Terminal Help
student@student-VirtualBox:~/Desktop/Homework/csc415-assignment-2b-ArslanAlimov$
make
gcc -c -o b_io.o b_io.c -g -I.
gcc -o Alimov_Arslan_HW2b_main b_io.o 2b-main.o -g -I.
student@student-VirtualBox:~/Desktop/Homework/csc415-assignment-2b-ArslanAlimov$
```

Screen shot(s) of the execution of the program:

```
student@student-VirtualBox: ~/Desktop/Homework/csc415-assignment-2b-ArslanAlimov
File Edit View Search Terminal Help
student@student-VirtualBox:~/Desktop/Homework/csc415-assignment-2b-ArslanAlimov$ make run
./Alimov_Arslan_HW2b_main DATA DecOfInd.txt
The unanimous Declaration of the thirteen united States of America, When in the
Course of human events, it becomes necessary for one people to dissolve the poli
tical bands which have connected them with another, and to assume among the powe
rs of the earth, the separate and equal station to which the Laws of Nature and
of Nature's God entitle them, a decent respect to the opinions of mankind requir
es that they should declare the causes which impel them to the separation.

We h
old these truths to be self-evident, that all men are created equal, that they a
re endowed by their Creator with certain unalienable Rights, that among these ar
e Life, Liberty and the pursuit of Happiness.--That to secure these rights, Gove
rnments are instituted among Men, deriving their just powers from the consent of
the governed, --That whenever any Form of Government becomes destructive of the
se ends, it is the Right of the People to alter or to abolish it, and to institu
te new Government, laying its foundation on such principles and organizing its p
owers in such form, as to them shall seem most likely to effect their Safety and
Happiness. Prudence, indeed, will dictate that Governments long established sho
uld not be changed for light and transient causes; and accordingly all experienc
e hath shewn, that mankind are more disposed to suffer, while evils are sufferab
le, than to right themselves by abolishing the forms to which they are accustome
d. But when a long train of abuses and usurpations, pursuing invariably the same
Object evinces a design to reduce them under absolute Despotism, it is their ri
ght, it is their duty, to throw off such Government, and to provide new Guards f
or their future security.--Such has been the patient sufferance of these Colonie
s; and such is now the necessity which constrains them to alter their former Sys
tems of Government. The history of the present King of Great Britain is a histor
y of repeated injuries and usurpations, all having in direct object the establis
hment of an absolute Tyranny over these States. To prove this, let Facts be subm
itted to a candid world.

He has refused his Assent to Laws, the most wholesome
and necessary for the public good.

He has forbidden his Governors to pass Laws
of immediate and pressing importance, unless suspended in their operation till h
is Assent should be obtained; and when so suspended, he has utterly neglected to
```