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* Class:   CSC-415-03 Spring 2021
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* Project:Assignment 5 - Buffered Write
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* File:Singh_Manjot_HW2_Description.pdf
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* Description: Briefly described the program written to handle
buffered IO where we did the buffering.
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DESCRIPTION:

I used struct to handle the opening of 20 files at once. Each file has its own buffer of 512 bytes which is assigned using the malloc. I used the Linux System call open and for loop in b_open to return the file descriptor. I had a problem of copying bytes into the caller buffer that couldn't be directly copied. To handle this, I had to use a bunch of temporary variables to track my positioning in the buffer and keep track of remaining bytes to transfer. I used C library memcpy to copy from my buffer to the callers buffer. After we are done copying bytes from my buffer to the callers buffer, we return the bytes that were copied to their buffer. Then after we are done with the buffering, we close the file descriptor and free the buffer. Using the similar design to b_read, I created a b_write function to write the data into a new text file called clean.txt.

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student@student-VirtualBox:~/Documents/assignment-5-buffered-io-write-manjot0515$ make
gcc -c -o Singh_Manjot_HW5_main.o Singh_Manjot_HW5_main.c -g -I.
gcc -c -o b_io.o b_io.c -g -I.
gcc -o Singh_Manjot_HW5_main Singh_Manjot_HW5_main.o b_io.o -g -I.
student@student-VirtualBox:~/Documents/assignment-5-buffered-io-write-manjot0515$ make run
student@student-VirtualBox:~/Documents/assignment-5-buffered-io-write-manjot0515$ █

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