The solution must be submitted in <u>one PDF</u> file. Screenshots must be embedded in the PDF file. Ensure everything is correct before the due date, as no corrections will be accepted after that.

Question 1: (10 Points)

What is the difference between shell and bash?

Bash uses git natively and needs to be installed separately (on windows), terminal is for general purpose but can use git commands, terminal comes with the OS.

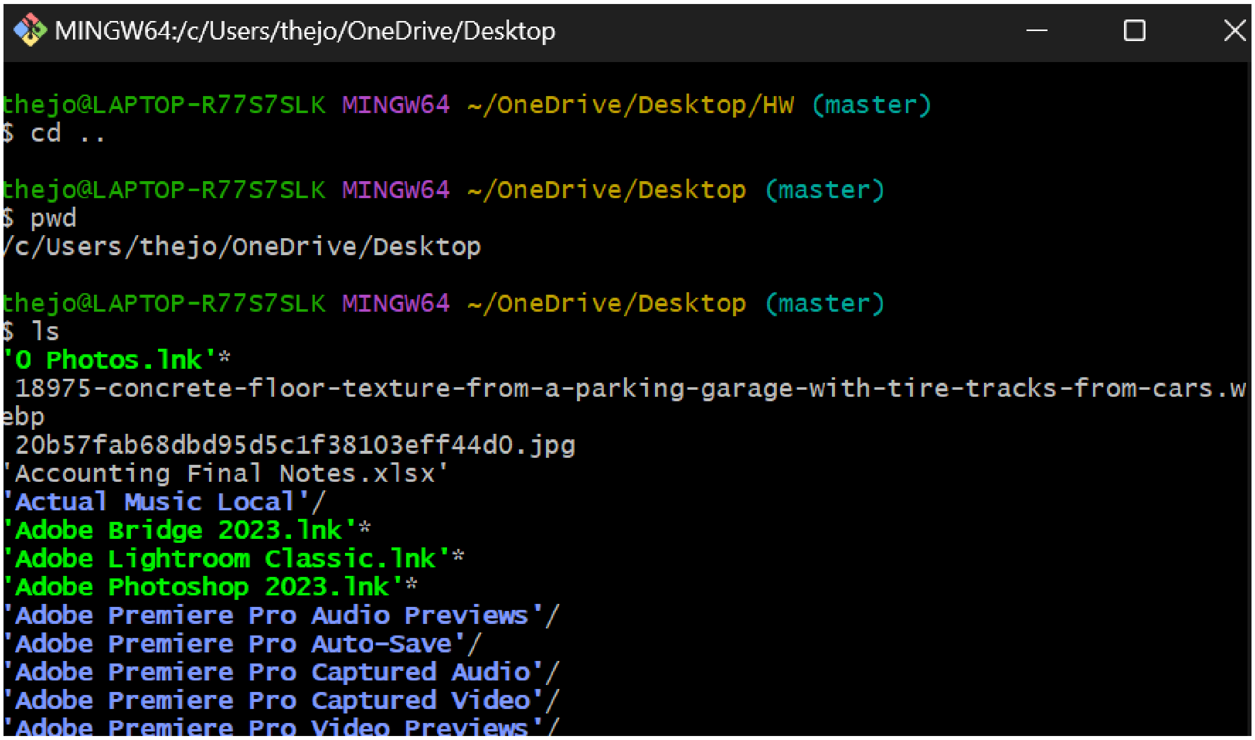
Question 2: (10 Points) To respond to this question, you need to use terminal/Bash and have a screenshot of your terminal/bash.

A. What is your home directory?

My Desktop. c/Users/thejo/OneDrive/Desktop

B. What files/folders exist in it?

Many of my files are on my desktop, but a few are Adobe Bridge 2023, Actual Music Local, and Adobe Photoshop



MINGW64:/c/Users/thejo/OneDrive/Desktop

```
thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop/HW (master)
$ cd ..

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop (master)
$ pwd
/c/Users/thejo/OneDrive/Desktop

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop (master)
$ ls
'0 Photos.lnk'*
 18975-concrete-floor-texture-from-a-parking-garage-with-tire-tracks-from-cars.w
ebp
 20b57fab68dbd95d5c1f38103eff44d0.jpg
'Accounting Final Notes.xlsx'
'Actual Music Local'/
'Adobe Bridge 2023.lnk'*
'Adobe Lightroom Classic.lnk'*
'Adobe Photoshop 2023.lnk'*
'Adobe Premiere Pro Audio Previews'/
'Adobe Premiere Pro Auto-Save'/
'Adobe Premiere Pro Captured Audio'/
'Adobe Premiere Pro Captured Video'/
'Adobe Premiere Pro Video Previews'/
```

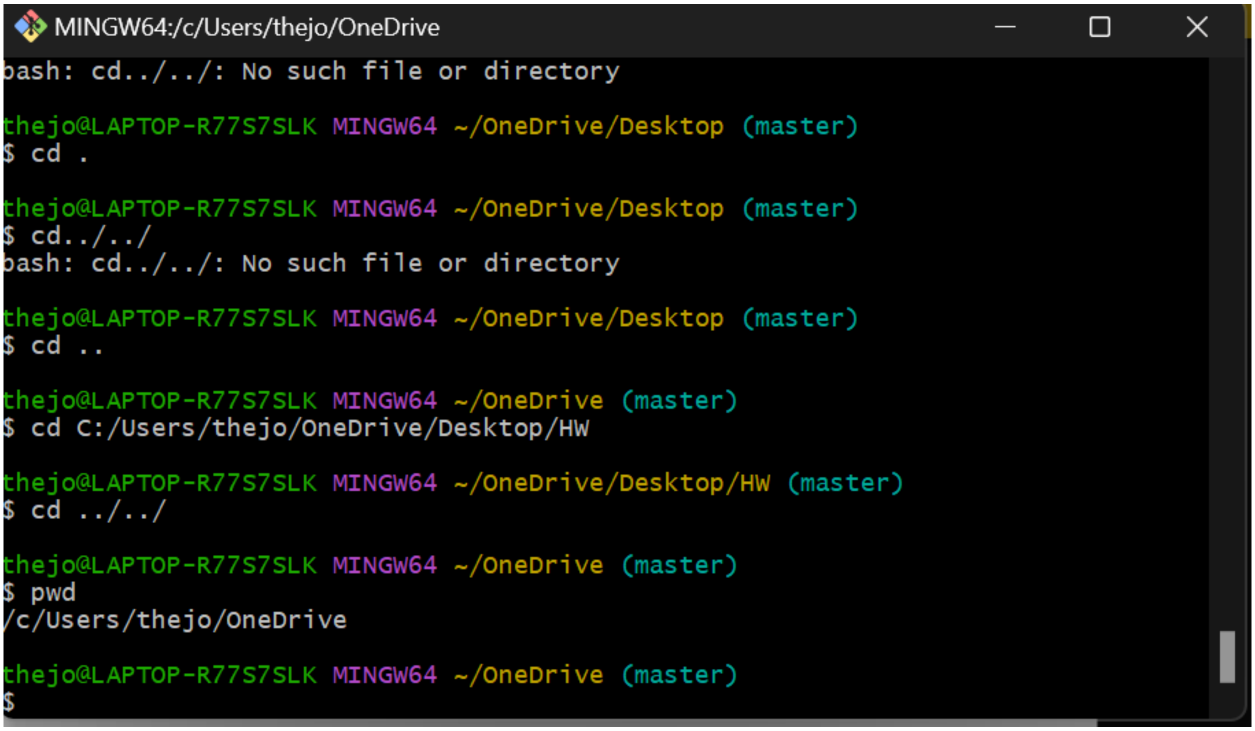
Question 3: (10 Points) To respond to this question, you need to use terminal/Bash and have a screenshot of your terminal/bash.

A. Where does the command `cd../../` take you? Run the command `pwd` and explain the output!

Cd ../../ set the current directory two folder back. Since my cd is my desktop, it was unable to go two back, so I set it forward to Desktop/HW so that I could move it back two folders like the question asked.

B. What does the command `cd` do? Run the command `pwd` and explain the output!

The command pwd shows my current directory and it is now OneDrive.



```
bash: cd../../: No such file or directory

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop (master)
$ cd .

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop (master)
$ cd../../
bash: cd../../: No such file or directory

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop (master)
$ cd ..

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ cd C:/Users/thejo/OneDrive/Desktop/HW

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/Desktop/HW (master)
$ cd ../../

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ pwd
/c/Users/thejo/OneDrive

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$
```

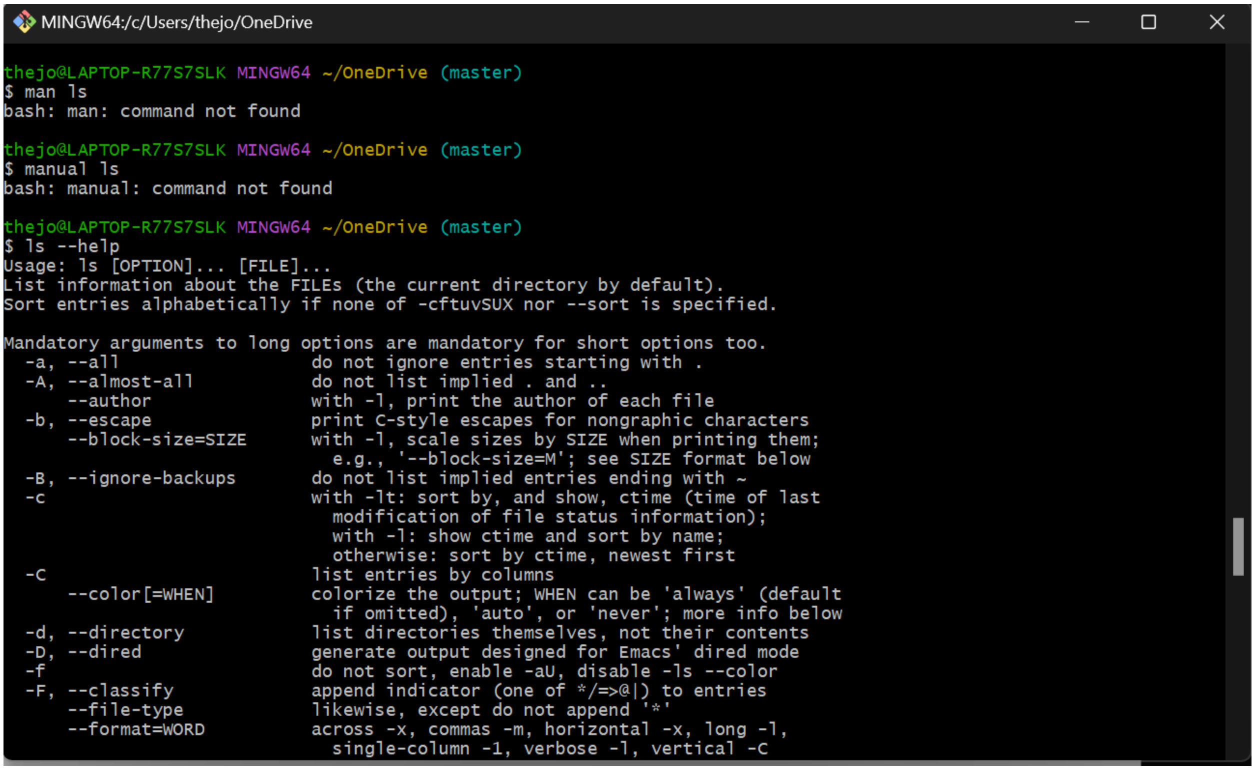
Question 4: (10 Points) To respond to this question, you need to use terminal/Bash and have a screenshot of your terminal/bash.

Read the manual page of ls. What does the `a` flag do? What does the `l` flag do?

I used ls –help

a flag is used so git/bash selects all files and doesn't ignore ones that begin with '.'

I flag is used to print the index number of each file



```
thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ man ls
bash: man: command not found

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ manual ls
bash: manual: command not found

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILEs (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
  -a, --all                  do not ignore entries starting with .
  -A, --almost-all           do not list implied . and ..
      --author               with -l, print the author of each file
  -b, --escape               print C-style escapes for nongraphic characters
      --block-size=SIZE      with -l, scale sizes by SIZE when printing them;
                               e.g., '--block-size=M'; see SIZE format below
  -B, --ignore-backups       do not list implied entries ending with ~
  -c                         with -lt: sort by, and show, ctime (time of last
                               modification of file status information);
                               with -l: show ctime and sort by name;
                               otherwise: sort by ctime, newest first
  -C                         list entries by columns
      --color[=WHEN]         colorize the output; WHEN can be 'always' (default
                               if omitted), 'auto', or 'never'; more info below
  -d, --directory            list directories themselves, not their contents
  -D, --dired                generate output designed for Emacs' dired mode
  -f                         do not sort, enable -aU, disable -ls --color
  -F, --classify             append indicator (one of */=>@|) to entries
      --file-type            likewise, except do not append '*'
      --format=WORD          across -x, commas -m, horizontal -x, long -l,
                               single-column -1, verbose -l, vertical -C
```

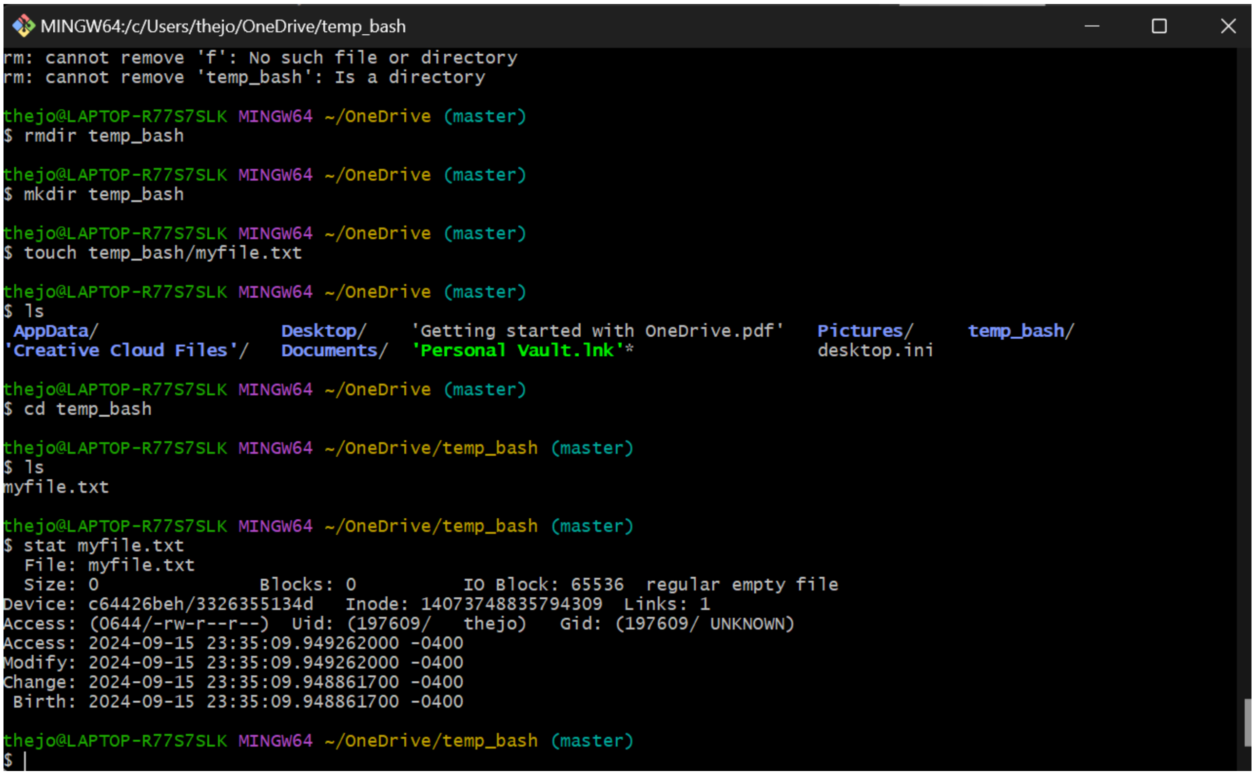
Question 5: (A and B each have 5 points, and C has 10 points. The total is 20 points.) To respond to this question, you need to use terminal/Bash and have a screenshot of your terminal/bash.

A. **Create a folder within your home directory, which was identified in Question 2, and name it 'temp_bash'.**

B. **Create a new file using the command `touch` and name it `myfile.txt` inside the new folder `temp_bash` and run `ls` to show that the file is inside the folder.**

C. **Run the `stat myfile.txt` command and explain the information retrieved from the output. Here is an example of what should be included in the output and a brief explanation for each part.**

- **`Blocks: 0 `   The number of blocks for the file.**
- **`IO Block: 65536`   The size of each block.**



```
rm: cannot remove 'f': No such file or directory
rm: cannot remove 'temp_bash': Is a directory

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ rmdir temp_bash

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ mkdir temp_bash

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ touch temp_bash/myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ ls
 AppData/                  Desktop/    'Getting started with OneDrive.pdf'   Pictures/     temp_bash/
'Creative Cloud Files'/    Documents/  'Personal Vault.lnk'*                 desktop.ini

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive (master)
$ cd temp_bash

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ ls
myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ stat myfile.txt
  File: myfile.txt
  Size: 0               Blocks: 0          IO Block: 65536  regular empty file
Device: c64426beh/3326355134d   Inode: 14073748835794309  Links: 1
Access: (0644/-rw-r--r--)  Uid: (197609/   thejo)   Gid: (197609/ UNKNOWN)
Access: 2024-09-15 23:35:09.949262000 -0400
Modify: 2024-09-15 23:35:09.949262000 -0400
Change: 2024-09-15 23:35:09.948861700 -0400
 Birth: 2024-09-15 23:35:09.948861700 -0400

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ |
```

The information shows the name, file size (0 because no content) the device, access, modify, change, and birth dates for the file. 0 Blocks because no content, IO block is not storage value, but it represents how the OS handles storing data to that file. All other parts are just the date and time of creation, because the file has no content and has never been modified.

Question 6: (40 Points) To respond to this question, you need to use terminal/Bash and have a screenshot of your terminal/bash.

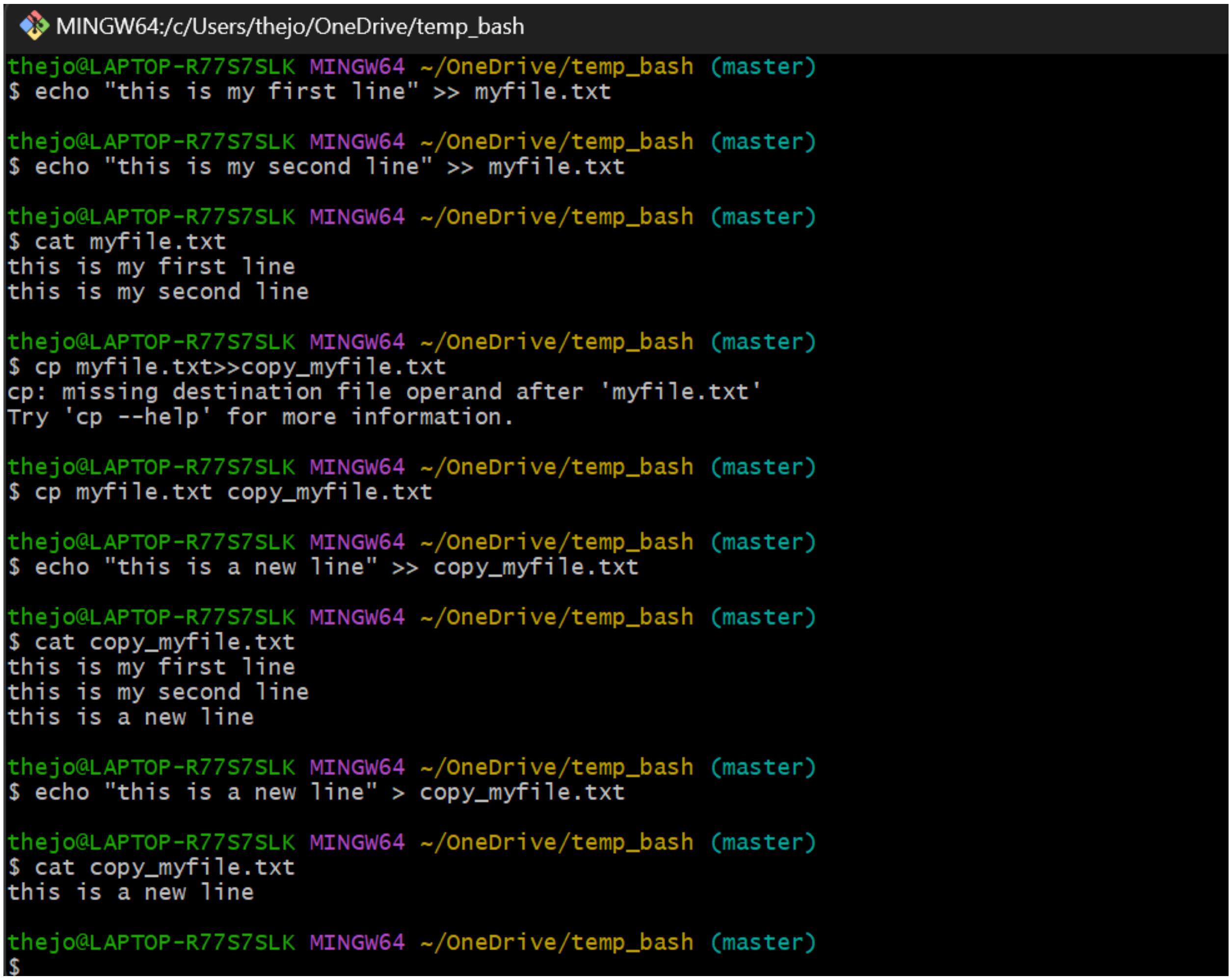
A. **Use the command `>>` and add the following line This line is my first line. Now add the following line This line is my second line. Then, run cat myfile.txt to show that the line has been added.**

B. **Copy the file myfile.txt to file copy_myfile.txt with the command `cp`**

C. **Use the command `>` and add the following line This line is a new line to copy_myfile.txt. Then run cat copy_myfile.txt to show the line is added.**

D. **Explain the difference between `>` and `>>` based on the result of the Question 6.**

The difference between > and >> is that > overwrites the existing content, while >> adds new content to the next line.


MINGW64:/c/Users/thejo/OneDrive/temp_bash

```
thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ echo "this is my first line" >> myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ echo "this is my second line" >> myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ cat myfile.txt
this is my first line
this is my second line

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ cp myfile.txt>>copy_myfile.txt
cp: missing destination file operand after 'myfile.txt'
Try 'cp --help' for more information.

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ cp myfile.txt copy_myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ echo "this is a new line" >> copy_myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ cat copy_myfile.txt
this is my first line
this is my second line
this is a new line

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ echo "this is a new line" > copy_myfile.txt

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$ cat copy_myfile.txt
this is a new line

thejo@LAPTOP-R77S7SLK MINGW64 ~/OneDrive/temp_bash (master)
$
```