EXERCISE

1

DOS INTERNAL & EXTERNAL COMMANDS

I. PROGRAM OUTCOME/S (PO) ADDRESSED BY THE LABORATORY EXERCISE

- Ability to demonstrate understanding and proficiency of IT specialization [PO: I]
- Ability to use and apply current technical concepts and practices in the core information technologies; human computer interaction, information management, programming, networking and web systems and technologies. [PO: J]

II. COURSE LEARNING OUTCOME/S (CLO) ADDRESSED BY THE LABORATORY EXERCISE

- Demonstrate an understanding of Disk Operating System (DOS) and LINUX history and concepts. [CLO: 1]
- Perform file and directory creation and manipulation using DOS commands; LINUX installation in virtual machine, file and directory creation and manipulation, and system administration using LINUX commands. [CLO: 2]

III. INTENDED LEARNING OUTCOME/S (ILO) OF THE LABORATORY EXERCISE

At the end of this exercise, students must be able to:

- Understand the history and concepts of DOS
- Able to perform file and directory creation and manipulation using DOS commands

IV. BACKGROUND INFORMATION

- MS-DOS was originally called 86-DOS. It was written by Tim Patterson (considered the father of DOS) and owned by Seattle Computer Products. Microsoft bought 86-DOS for $75,000, licensed the software and released it with an IBM PC as MS-DOS 1.0 in 1982.
- MS-DOS was originally designed to run on any computer with an Intel 8086 processor, but the various hardware versions on these computers made compatibility difficult.
- As a result, Microsoft provided hardware equipment manufacturers with a development kit that could be used to tune the MS-DOS operating system for the computer's specific hardware.
- There were many versions of MS-DOS. There were also compatibility issues with MS-DOS and IBM where some machines were compatible with MS-DOS but not IBM. These computers could

only run programs that were written for MS-DOS and did not depend on any of IBM's peripheral architecture.

When you are using a Microsoft MS-DOS command prompt shell window, you can type the following commands into the window.
cd : Change directory or display current directory path.
cls : Clear the window.
dir : Display list of contents of current directory.
help : Display list of commands or help about a command.
notepad : Run the Windows Notepad text editor.
type : Displays the content of a text file.

Some other useful commands are:
assoc : Displays or modifies filename extension associations.
attrib : Displays or changes file attributes.
chkdsk : Checks a disk and displays a status report.
color : Sets the text and background colors.
comp : Compares the contents of two files or sets of files.
copy : Copies one or more files to another location. See also: xcopy
date : Displays or sets the computer's date. See also: time
del (or **erase**) : Deletes one or more files.
defrag : Defragment the specified storage device.
doskey : Display command history; define macros.
echo : Displays messages, or turns command echoing on/off.
edit : Runs the MS-DOS text editor. See also: notepad
exit : Closes the MS-DOS window.
fc : Compares two files or sets of files and displays the differences.
find : Searches for a text string in a file or files.
findstr : Search for a regular expression text string in a file or files.
goto : Used in a batch program file to jump to a particular line.
if : Used in a batch program file to perform conditional testing.
md (or **mkdir**) : Creates a directory.
more : Displays the contents of a file one screen at a time.
move : Moves one or more files from one directory to another directory.
rd (or **rmdir**) : Removes a directory.
rem : Used in a batch program file to identify comments.
ren (or **rename**) : Renames a file or files.
sort : Sorts input.
start : Starts a new window to run a specified program or command.
time : Displays or sets the computer's time. See also: date

tree : Graphically displays the directory structure of a drive or directory.
xcopy : Copies files and directory trees. See also: copy

V. LABORATORY ACTIVITY

INSTRUCTIONS:

1. Open your MS-DOS in your respective terminal.
2. Change drive to the H: drive - just type H: and hit enter. (You may your C: drive or any available drive if you do not have access to H: drive)
3. Create a new directory called OSLAB - MD OSLAB (or MKDIR OSLAB) and hit enter. This is where you will do ALL your work for these exercises.
4. Change directory to that new directory - OSLAB.
5. Create a file - COPY CON FILE1.TXT. Then type “Hello DOS World!”. When finished, hit F6 or CTRL+Z and then enter. You will now see the message "1 file(s) copied" which means you just created a file called file1.txt in the OSLAB directory.
6. As a check, do the following - TYPE FILE1.TXT and you will see the content of that file. Also type the command DIR and you will see the contents of the directory you're in (H:\OSLAB) including the newly created file.

TASKS:
Now you're ready to begin. Each numbered item has an answer (answer to the question, commands used and/or analysis and observation of the step or process).

Note:

- *Capture your executed commands and their respective outputs using a snipping **tool**.*
- *Save you file as **SURNAME_Expt1.docx***
- *Upload your accomplished lab activity report to our Canvas.*

1. Using copy command, copy FILE1.TXT to make the following filenames: file2.txt, file3.dat, file4.doc, file5.txt. Pay attention to the names and extensions of the files.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>copy FILE1.txt file2.txt
        1 file(s) copied.

C:\Users\xl38\OSLAB>copy FILE1.txt file3.dat
        1 file(s) copied.

C:\Users\xl38\OSLAB>copy FILE1.txt file4.doc
        1 file(s) copied.

C:\Users\xl38\OSLAB>copy FILE1.txt file5.txt
        1 file(s) copied.

C:\Users\xl38\OSLAB>
```

2. List out the directory and see ALL the newly created files.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>dir
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB

05/15/2021  08:34 PM    <DIR>          .
05/15/2021  08:34 PM    <DIR>          ..
05/15/2021  07:38 PM                16 FILE1.txt
05/15/2021  07:38 PM                16 file2.txt
05/15/2021  07:38 PM                16 file3.dat
05/15/2021  07:38 PM                16 file4.doc
05/15/2021  07:38 PM                16 file5.txt
               5 File(s)             80 bytes
               2 Dir(s)  40,330,403,840 bytes free

C:\Users\xl38\OSLAB>
```

3. Now you just want to see a list of the files that have TXT as their extension.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>dir *.txt
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB

05/15/2021  07:38 PM                16 FILE1.txt
05/15/2021  07:38 PM                16 file2.txt
05/15/2021  07:38 PM                16 file5.txt
               3 File(s)             48 bytes
               0 Dir(s)  40,330,764,288 bytes free
```

4. Make a copy of file4.doc and call it first.dat
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>copy file4.doc first.dat
        1 file(s) copied.
```

5. Create a subdirectory under the directory you're currently in. Call this new directory TESTDIR.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>md TESTDIR

C:\Users\xl38\OSLAB>dir
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB

05/15/2021  08:57 PM    <DIR>          .
05/15/2021  08:57 PM    <DIR>          ..
05/15/2021  07:38 PM                16 FILE1.txt
05/15/2021  07:38 PM                16 file2.txt
05/15/2021  07:38 PM                16 file3.dat
05/15/2021  07:38 PM                16 file4.doc
05/15/2021  07:38 PM                16 file5.txt
05/15/2021  07:38 PM                16 first.dat
05/15/2021  08:57 PM    <DIR>          TESTDIR
               6 File(s)             96 bytes
               3 Dir(s)  40,330,817,536 bytes free
```

6. Using a wildcard, copy all the files with an extension of DAT to the new subdirectory.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>copy *.dat TESTDIR
file3.dat
first.dat
        2 file(s) copied.
```

7. Change directories to the newly created directory and list all the files in there.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>cd TESTDIR

C:\Users\xl38\OSLAB\TESTDIR>dir
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB\TESTDIR

05/15/2021  09:00 PM    <DIR>          .
05/15/2021  09:00 PM    <DIR>          ..
05/15/2021  07:38 PM                16 file3.dat
05/15/2021  07:38 PM                16 first.dat
               2 File(s)             32 bytes
               2 Dir(s)  40,329,490,432 bytes free
```

8. Delete file3.dat.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB\TESTDIR>del file3.dat

C:\Users\xl38\OSLAB\TESTDIR>dir
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB\TESTDIR

05/15/2021  09:02 PM    <DIR>          .
05/15/2021  09:02 PM    <DIR>          ..
05/15/2021  07:38 PM                16 first.dat
               1 File(s)             16 bytes
               2 Dir(s)  40,327,974,912 bytes free
```

9. Go back up to the parent directory of the current directory you are in.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB\TESTDIR>cd..

C:\Users\xl38\OSLAB>
```

10. List all the files with an extension of DAT in the current directory and the one you just created. Use only one command to do so.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>dir *.dat /b /s /A-D /o:gn
C:\Users\xl38\OSLAB\file3.dat
C:\Users\xl38\OSLAB\first.dat
C:\Users\xl38\OSLAB\TESTDIR\first.dat

C:\Users\xl38\OSLAB>
```

11. Change the name of file1.txt to file6.txt.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>ren FILE1.txt file6.txt

C:\Users\xl38\OSLAB>dir
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB

05/15/2021  09:23 PM    <DIR>          .
05/15/2021  09:23 PM    <DIR>          ..
05/15/2021  07:38 PM                16 file2.txt
05/15/2021  07:38 PM                16 file3.dat
05/15/2021  07:38 PM                16 file4.doc
05/15/2021  07:38 PM                16 file5.txt
05/15/2021  07:38 PM                16 file6.txt
05/15/2021  07:38 PM                16 first.dat
05/15/2021  09:02 PM    <DIR>          TESTDIR
               6 File(s)             96 bytes
               3 Dir(s)  40,310,407,168 bytes free
```

12. Create another directory TESTDIR2 and copy the directory/folder TESTDIR to the newly created directory.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>xcopy TESTDIR TESTDIR2
Does TESTDIR2 specify a file name
or directory name on the target
(F = file, D = directory)? d
TESTDIR\first.dat
1 File(s) copied
```

13. Remove the directory you created (TESTDIR). Are you able to do this? Why or Why not?

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>del TESTDIR
C:\Users\xl38\OSLAB\TESTDIR\*, Are you sure (Y/N)? Y
```

Answer:

No, because the file in TESTDIR is also at TESTDIR2.

14. Use wildcard to list all the files that start with FI and have an extension of TXT.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>dir fi*.txt /b
file2.txt
file5.txt
file6.txt
```

15. Use wildcard to list all the files that start with the word FILE, then a single character and with an extension filename of TXT.

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>dir file?.txt
 Volume in drive C is Windows
 Volume Serial Number is 9235-439B

 Directory of C:\Users\xl38\OSLAB

05/15/2021  07:38 PM                16 file2.txt
05/15/2021  07:38 PM                16 file5.txt
05/15/2021  07:38 PM                16 file6.txt
               3 File(s)             48 bytes
               0 Dir(s)  40,304,005,120 bytes free
```

16. Check the file attributes of file5.txt. What are the given attributes?

Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>attrib file5.txt
A                  C:\Users\xl38\OSLAB\file5.txt
```

Answer: No attributes are set on file5.txt

17. Give system, hidden and read-only file attributes to file5.txt.

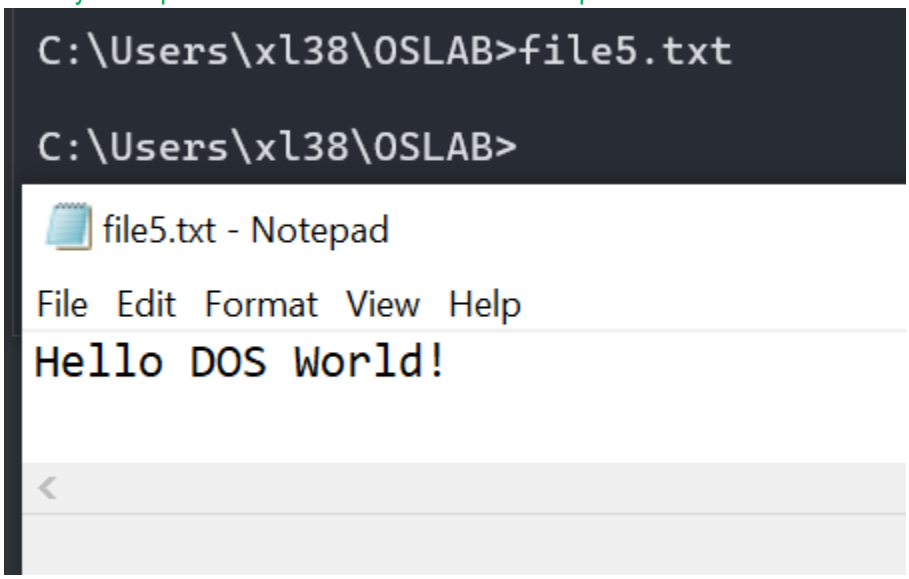
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>attrib +s +h +r file5.txt

C:\Users\xl38\OSLAB>attrib
A                       C:\Users\xl38\OSLAB\file2.txt
A                       C:\Users\xl38\OSLAB\file3.dat
A                       C:\Users\xl38\OSLAB\file4.doc
A  SHR                  C:\Users\xl38\OSLAB\file5.txt
A                       C:\Users\xl38\OSLAB\file6.txt
A                       C:\Users\xl38\OSLAB\first.dat
```

18. Display the content of file5.txt

Paste your captured executed commands and output below:




```
C:\Users\xl38\OSLAB>type file5.txt
Hello DOS World!
C:\Users\xl38\OSLAB>
```

19. Using a redirector, combine file5.txt and file6.txt content to another filename combine.txt
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>type file5.txt file6.txt > combine.txt

file6.txt



C:\Users\xl38\OSLAB>type combine.txt
Hello DOS World!Hello DOS World!
C:\Users\xl38\OSLAB>
```

20. Display the word "I am now a GOOD DOS USER!" on screen.
Paste your captured executed commands and output below:

```
C:\Users\xl38\OSLAB>echo I am now a GOOD DOS USER!
I am now a GOOD DOS USER!
```

Observation:

Based on my observation on this exercise, this is an introduction in the various ways to create and manipulate a file in MS-DOS or from the Windows Command Prompt where I explored and learned the basic commands needed in organizing, locating, moving, copying, storing and retrieving the information that resides in a storage disk.

Conclusion:

I conclude that MS-DOS, rather than using a GUI like Windows, allows users to access, open, and otherwise control files on their machine using a command line. I used Command Prompt, a Windows command line interpreter that emulates many of the command line abilities available in MS-DOS but it is not actually MS-DOS. While MS-DOS is no longer in use today, many Windows users use the cmd as the default command-line interpreter.