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Description automatically generated

**AMERICAN INTERNATIONAL UNIVERSITY – BANGLADESH**

**DEPARTMENT OF COMPUTER SCIENCE**

**OPERATING SYSTEM**

**FALL 2024-2025**

**Mid Term Report**

**Group No: 09**

**Section: H**

Submitted By

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| **Command Name** | **Explanation** | **Example** |
| pwd | Prints the current working directory path. | pwd |
| uname | Displays basic infoArmation about the OS. | Uname |
| uname -r | Displays the current kernel version. | uname -r |
| uname -m | Shows the system architecture type. | uname -m |
| mkdir | Creates a new folder in the current location. | mkdir NewDir |
| mkdir -p | Creates directories within directories(Nested  Directories) | mkdir -p dir1/dir2/dir3 |
| cd | Changes the current working directory to a specified one. | cd dir1/dir2  cd .. |
| ls | Lists files and directories within the current directory | ls |
| ls -la | Lists all files with detailed permissions. | ls -la |
| ls -a | Shows all files, including hidden files. | ls -a |
| ls \*.[extension name] | Lists all the files with the given extension name | ls \*.txt |
| touch | Creates an empty file, to creates multiple files simultaneously, to create hidden files | touch file.txt  touch file1.txt file2.txt  touch .hidden file |
| touch | Creates multiple files simultaneously. |  |
| echo | Writes text to a file, overwriting existing content. | echo "Hello" > file.txt |
| echo | Append text to the end of a file. | echo "World" >> file.txt |
| cat | Displays the content of a file. | cat file.txt  Hello World |
| > | Saves the output of a command to a file. | pwd > output.txt |
| >> | Appends command output to an existing file. | uname >> logFile.txt |
| **Command Name** | **Explanation** | **Example** |
| history | Shows the command output | history >> History.txt |
| cat | Combines multiple files into a new file. | cat output.txt file2.txt >>  combined.txt |
| cat -n | Displays the content of a file with line numbers. | cat -n combined.txt |
| mv | Moves a file to a new location. | mv file2.txt mydir |
| rm | Deletes a file. | rm file1\_backup.txt |
| cp | Copies a file to a new file. | cp file1.txt file1\_backup.txt |
| cp | Copies files to a new directory. | cp output.txt mydir/ file2.txt |
| mv | Rename a file to a new one | mv old\_name.txt new\_name.txt |
| rm -d | Removes an empty directory. | rm -d EmptyDirectory |
| rm -r | Deletes a directory and all its contents. | rm -r testdir |
| date | Displays the current date and time in the default format. | date |
| date | Displays the current date in AM/PM format. | date "+%r" |
| cd --help | Provides help for the cd command. | cd --help |
| ncal | Displays the current month calendar with Sunday as the first day. | ncal -dS |
| echo | Performs a calculation in the terminal. | echo $(( (3 + 4) \* 5 )) |
| wc | Counts the total lines, words, and characters in a file. | wc a.txt |
| wc -c | Displays only the number of characters in a file. | wc -c a.txt |
| wc -l | Displays only the number of lines in a file. | wc -l a.txt |
| nl | Displays the contents of a file with line numbers. | nl a.txt |
| nl -i2 | Increments line numbers by a specified value (e.g., 1, 3, 5). | nl -i2 a.txt |
| sort | Sorts the contents of a file alphabetically. | sort a.txt |
| **Command Name** | **Explanation** | **Example** |
| sort -r | Sorts the contents of a file in reverse order. | sort -r a.txt |
| sort -u | Removes duplicate lines while sorting. | sort -u a.txt |
| sort -k | Sorts based on a specific word or field in each line. | sort -k 2 a.txt |
| head | Displays the first 10 lines of a file. | head a.txt |
| tail | Displays the last 10 lines of a file. | tail a.txt |
| head -6c | Displays the first 6 characters of a file. | head -6c a.txt |
| head -5 | Displays the first 5 lines of a file. | head -5 a.txt |
| head | Displays the first 5 lines of multiple files. | head -5 a.txt b.txt |
| cut | Cuts fields after a specific delimiter. | cut -d, -f 1,3 a.txt |
| cut -c | Cuts a range of characters from a file. | cut -c 1-4 a.txt |
| cut -c | Cuts all characters starting from a specific position. | cut -c 5- a.txt |
| paste | Merges the contents of two files line by line. | paste f1.txt f2.txt |
| paste -d | Adds a delimiter between merged lines. | paste -d "," f1.txt f2.txt |
| date -u | Displays the current date and time in UTC format. | date -u |
| grep | Searches for a specific word in a file (case-insensitive). | grep -i "World" a.txt |
| grep | Searches for a specific word in a file (case-sensitive). | grep "World" a.txt |
| grep -c | Counts the exact occurrences of a word in a file. | grep -c "World" a.txt |
| grep -c -i | Counts occurrences of a word (case-insensitive). | grep -c -i "World" a.txt |
| grep -o | Displays only the matched word from a file. | grep -o "World" a.txt |
| grep -v | Displays all lines except those containing a word. | grep -v "World" a.txt |
| chmod | Changes file permissions. | chmod 644 f1.txt |
| **Command Name** | **Explanation** | **Example** |
| man | Displays the manual page for a command (e.g., mkdir, rm). | man mkdir |
| ls | grep | Filters file names using a pattern. | ls | grep "test" |
| sort --ignore-case | Sorts file names in alphabetical order ignoring case. | ls | sort --ignore-case |
| time | Measures and displays the time taken to execute a command. | time |
| ps aux | Displays detailed information about all running processes. | ps aux |
| ifconfig | Displays network configuration information. | ifconfig |