# KGiSL Microcollege, Coimbatore.

# **Software Programming**

## **Windows Commands**

The following are the top Windows commands:

## driverquery – **Lists All Installed Drivers**

It is important to have access to all drivers because they often cause problems.

That's what this command does – it shows you even the drivers you won't find in the device manager.

C:\Users\user>driv

C:\Users\user	rxdriverquery		
Module Name	Display Name	Driver Type	Link Date
========	=======================================	=========	=======================================
1394ohci	1394 OHCI Compliant Ho	Kernel	
3ware	3ware	Kernel	5/18/2015 11:28:03 PM
Acceleromete	HP Mobile Data Protect	Kernel	3/21/2022 7:54:41 PM
ACPI	Microsoft ACPI Driver	Kernel	
AcpiDev	ACPI Devices driver	Kernel	
acpiex	Microsoft ACPIEx Drive	Kernel	
acpipagr	ACPI Processor Aggrega	Kernel	
AcpiPmi	ACPI Power Meter Drive	Kernel	
acpitime	ACPI Wake Alarm Driver	Kernel	
Acx01000	Acx01000	Kernel	
ADP80XX	ADP80XX	Kernel	4/9/2015 9:49:48 PM
AFD	Ancillary Function Dri	Kernel	
afunix	afunix	Kernel	
ahaaaha	Application Compatibil	Konnol	

## chdir or cd – Changes the Current Working Directory to the Specified Directory

Command Prompt

C:\Users\user><mark>cd desktop</mark>
C:\Users\user\Desktop>

#### systeminfo – Shows Your PC's Details

If you want to see more detailed information about your system you won't see in the GUI, this is the command for you.

#### Command Prompt

Host Name: DESKTOP-3BGCHRR

OS Name: Microsoft Windows 10 Pro
OS Version: 10.0.19044 N/A Build 19044

OS Manufacturer: Microsoft Corporation
OS Configuration: Standalone Workstation
OS Build Type: Multiprocessor Free

Registered Owner: user

Registered Organization:

C:\Users\user>systeminfo

Product ID: 00330-50546-45898-AAOEM
Original Install Date: 11/27/2021, 12:37:40 PM
System Boot Time: 8/8/2022, 8:29:22 AM

System Manufacturer: HP

System Model: HP EliteBook 840 G3

System Type: x64-based PC

Processor(s): 1 Processor(s) Installed.

### set – Shows your PC's Environment Variables

#### Command Prompt

C:\Users\user\Desktop><mark>set</mark> ALLUSERSPROFILE=C:\ProgramData APPDATA=C:\Users\user\AppData\Roaming ChocolateyInstall=C:\ProgramData\chocolatey ChocolateyLastPathUpdate=133041797766612056 CommonProgramFiles=C:\Program Files\Common Files CommonProgramFiles(x86)=C:\Program Files (x86)\Common Files
CommonProgramW6432=C:\Program Files\Common Files
COMPUTERNAME=DESKTOP-3BGCHRR ComSpec=C:\WINDOWS\system32\cmd.exe DriverData=C:\Windows\System32\Drivers\DriverData FPS\_BROWSER\_APP\_PROFILE\_STRING=Internet Explorer FPS\_BROWSER\_USER\_PROFILE\_STRING=Default GOPATH=C:\Users\user\Desktop\Go-codes HOMEDRIVE=C: HOMEPATH=\Users\user LOCALAPPDATA=C:\Users\user\AppData\Local LOGONSERVER=\\DESKTOP-3BGCHRR NUMBER\_OF\_PROCESSORS=4 OneDrive=C:\Users\user\OneDrive OneDriveConsumer=C:\Users\user\OneDrive OS=Windows\_NT Path=C:\Users\user\AppData\Local\Programs\Python\Python310\Scripts\;C:\Users\user\AppData\Local\Programs\ 2\WindowsPowerShell\v1.0\;C:\WINDOWS\System32\OpenSSH\;C:\Program Files\Git\cmd;C:\Program Files\Go\bin;C Menu\Programs\Python 3.10;C:\Program Files\nodejs\;C:\ProgramData\chocolatey\bin;C:\Program Files (x86)\ rams\Microsoft VS Code\bin;C:\Users\user\go\bin;C:\xampp\php;C:\Users\user\AppData\Roaming\npm;C:\Users\user\App\Roaming\npm;C:\User\\App\Roaming\user\App\Roaming\npm;C:\User\App\Roaming\npm;C:\User\App\Roaming\user\App\Roaming\Roaming\npm;C:\User\App\Roaming\Ro php=C:\xampp PROCESSOR\_ARCHITECTURE=AMD64 PROCESSOR\_IDENTIFIER=Intel64 Family 6 Model 78 Stepping 3, GenuineIntel PROCESSOR\_REVISION=4e03 ProgramData=C:\ProgramData ProgramFiles=C:\Program Files ProgramFiles(x86)=C:\Program Files (x86) ProgramW6432=C:\Program Files

#### prompt – Changes the Default Text Shown before Entering Commands

By default, the command prompt shows the C drive path to your user account.

You can use the prompt command to change that default text with the syntax prompt prompt\_name \$G:

Command Prompt

```
C:\Users\user>prompt you do what i say $G
you do what i say >
```

**N.B**: If you don't append \$G to the command, you won't get the greater than symbol in front of the text.

## assoc - Lists Programs and the Extensions They are Associated With

Command Prompt

```
C:\Users\user>assoc
.386=vxdfile
.3g2=WMP11.AssocFile.3G2
.3ga=VLC.3ga
.3gp=WMP11.AssocFile.3GP
.3gp2=WMP11.AssocFile.3G2
.3gpp=WMP11.AssocFile.3GP
.669=VLC.669
.a52=VLC.a52
.AAC=WMP11.AssocFile.ADTS
.accda=Access.ACCDAExtension.15
.accdb=Access.Application.15
.accdc=Access.ACCDCFile.15
.accde=Access.ACCDEFile.15
.accdr=Access.ACCDRFile.15
.accdt=Access.ACCDTFile.15
.accdu=Access.WizardUserDataFile.15
 accdw=Access WebApplicationReference 15
```

title – Changes the Command Prompt Window Title Using the Format title window-title-name

```
C:\Users\user\Desktop><mark>title ksound</mark>
C:\Users\user\Desktop>
```

## fc - Compares Two Similar Files

If you are a programmer or writer and you want to quickly see what differs between two files, you can enter this command and then the full path to the two files. For example fc "file-1-path" "file-2-path".

```
C:\Users\user\C:\Users\user\Desktop\videoCourses\strapi-demo\strapi-api\package.json" "C:\Users\user\Desktop\videoCourses\Strapi\code\strapi-blog\package.json" "C:\Users\user\Desktop\videoCourses\Strapi\code\strapi-blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\strapi-lemo\strapi-api\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\strapi-code\strapi-lemo\strapi-api\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\strapi-Demo\strapi-api\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\strapi-Demo\strapi-api\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Demo\strapi-api\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Demo\strapi-Demo\strapi-api\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Demo\Strapi-Demo\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Demo\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Demo\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Blog\package.json and C:\Users\User\Desktop\videoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\Desktop\videoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\package.json and C:\User\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\Package.json and C:\User\User\Desktop\VideoCourses\Strapi\code\Strapi-Blog\Package.json and C:
```

#### cipher - Wipes Free Space and Encrypts Data

On a PC, deleted files remain accessible to you and other users. So, technically, they are not deleted under the hood.

You can use the cipher command to wipe the drive clean and encrypt such files.

Command Prompt

```
C:\Users\user;cipher
 Listing C:\Users\user\
New files added to this directory will not be encrypted.
U .bash_history
U .cache
U .dbshell
U .dbus-keyrings
U .gitconfig
U .lesshst
U .mongorc.js
U .quokka
U .software
U .virtualenvs
U .vscode
U .wallaby
U 3D Objects
U Contacts
```

#### netstat -an – Shows Open Ports, their IP Addresses and States

```
Command Prompt
:\Users\user>netstat -an
Active Connections
  Proto Local Address
                                Foreign Address
                                                       State
        0.0.0.0:135
                                0.0.0.0:0
                                                       LISTENING
  ТСР
        0.0.0.0:445
                                0.0.0.0:0
                                                       LISTENING
 TCP
        0.0.0.0:554
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:623
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:2869
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:5040
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:7250
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:7680
                                0.0.0.0:0
                                                       LISTENING
        0.0.0.0:10243
                                0.0.0.0:0
                                                       LISTENING
        0.0.0.0:16992
                                                       LISTENING
                                0.0.0.0:0
  TCP
        0.0.0.0:49664
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:49665
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:49666
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:49667
                                0.0.0.0:0
                                                       LISTENING
  TCP
        0.0.0.0:49668
                                0.0.0.0:0
                                                       LISTENING
        0.0.0.0:49678
 TCP
                                0.0.0.0:0
                                                       LISTENING
 TCP
        127.0.0.1:7335
                                0.0.0.0:0
                                                       LISTENING
```

# ping – Shows a Website IP Address, Lets you Know How Long it Takes to Transmit Data and a Get Response

```
C:\Users\user: ping "www.freecodecamp.org"

Pinging www.freecodecamp.org [104.26.3.33] with 32 bytes of data:
Reply from 104.26.3.33: bytes=32 time=152ms TTL=53
Reply from 104.26.3.33: bytes=32 time=168ms TTL=53
Reply from 104.26.3.33: bytes=32 time=182ms TTL=53
Reply from 104.26.3.33: bytes=32 time=153ms TTL=53

Ping statistics for 104.26.3.33:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:

Minimum = 152ms, Maximum = 182ms, Average = 163ms

C:\Users\user>
```

color - Changes the Text Color of the Command Prompt

#### Enter color attr to see the colors you can change to:

#### Entering color 2 changes the color of the terminal to green:

Command Prompt - cmd

```
C:\Users\user\Desktop>color 2

C:\Users\user\Desktop>_
```

## ipconfig - Shows Information about PC IP Addresses and Connections

Command Prompt

This command also has extensions such as ipconfig /release, ipconfig /renew, and ipconfig /flushdns which you can use to troubleshoot issues with internet connections.

#### sfc - System File Checker

This command scans your computer for corrupt files and repairs them. The extension of the command you can use to run a scan is /scannow.

```
Administrator: Command Prompt
  :\WINDOWS\system32><mark>sfc</mark>
Microsoft (R) Windows (R) Resource Checker Version 6.0
Copyright (C) Microsoft Corporation. All rights reserved.
Scans the integrity of all protected system files and replaces incorrect versions with correct Microsoft versions.
SFC [/SCANNOW] [/VERIFYONLY] [/SCANFILE=<file>] [/VERIFYFILE=<file>]
[/OFFWINDIR=<offline windows directory> /OFFBOOTDIR=<offline boot directory> [/OFFLOGFILE=<log file path>]]
                              Scans integrity of all protected system files and repairs files with problems when possible.

Scans integrity of all protected system files. No repair operation is
  'SCANNOW
 VERTEYONI Y
                              Scans integrity of the referenced file, repairs file if problems are identified. Specify full path <file>
Verifies the integrity of the file with full path <file>. No repair
  SCANFILE
 VERIFYFILE
                              operation is performed.

For offline repair, specify the location of the offline boot directory
For offline repair, specify the location of the offline windows directory
For offline repair, optionally enable logging by specifying a log file path
 /OFFBOOTDIR
 OFFWINDIR
 OFFLOGFILE
               sfc /SCANNOW
               sfc /SCANNOW
sfc /SCANFILE=c:\windows\system32\kernel32.dll
sfc /SCANFILE=d:\windows\system32\kernel32.dll /OFFBOOTDIR=d:\ /OFFWINDIR=d:\windows
sfc /SCANFILE=d:\windows\system32\kernel32.dll /OFFBOOTDIR=d:\ /OFFWINDIR=d:\windows /OFFLOGFILE=c:\log.txt
sfc /VERIFYONLY
  :\WINDOWS\system32>
```

#### powercfg - Controls Configurable Power Settings

You can use this command with its several extensions to show information about the power state of your PC.

You can enter powercfg help to show those extensions.

Administrator: Command Prompt

```
C:\WINDOWS\system32; powercfg help
POWERCFG /COMMAND [ARGUMENTS]
Description:
 Enables users to control power settings on a local system.
 For detailed command and option information, run "POWERCFG /? <COMMAND>"
Command List:
 /LIST, /L
                     Lists all power schemes.
 /QUERY, /Q
                     Displays the contents of a power scheme.
 /CHANGE, /X
                     Modifies a setting value in the current power scheme.
  /CHANGENAME
                     Modifies the name and description of a power scheme.
  /DUPLICATESCHEME
                     Duplicates a power scheme.
  /DELETE, /D
                     Deletes a power scheme.
  /DELETESETTING
                     Deletes a power setting.
```

For example, you can use powercfg /energy to generate a battery health report.

Administrator: C:\WINDOWS\system32\cmd.exe

```
C:\WINDOWS\system32>powercfg /energy
Enabling tracing for 60 seconds...
Observing system behavior...
Analyzing trace data...
Analysis complete.

Energy efficiency problems were found.

4 Errors
5 Warnings
66 Informational

See C:\WINDOWS\system32\energy-report.html for more details.

C:\WINDOWS\system32>
```

The powercfg /energy command will generate an HTML file containing the report. You can find the HTML file in C:\Windows\system32\energy-report.html.

#### dir - Lists Items in a Directory

Command Prompt

```
C:\Users\user\Desktop><mark>di</mark>r
 Volume in drive C has no label.
 Volume Serial Number is C080-FAEB
 Directory of C:\Users\user\Desktop
08/07/2022 02:21 PM
                           <DIR>
08/07/2022 02:21 PM
07/20/2022 04:10 PM
08/03/2022 01:45 PM
                           <DIR>
                           <DIR>
                                            Academind
                           <DIR>
                                            Articles
02/01/2022 01:43 PM
02/01/2022 11:43 AM
01/09/2022 09:30 PM
                          <DIR>
                                            Challenges
                                            CopywritingCourse
                          <DIR>
07/08/2022 07:58 AM
                          <DIR>
05/02/2022 10:03 AM
                                           deCodeTechInterviewProcess
                           <DIR>
                                     2,271 Discord.lnk
08/07/2022 06:05 PM
07/21/2022 06:03 PM
                                     2,181 Figma.lnk
04/06/2022 08:28 AM
                          <DIR>
                                            freeLance
03/29/2022 11:19 AM
                          <DIR>
                                            frontend
12/05/2021 01:22 PM
                                     2,392 Kolade (Ksound Personal) - Chrome.lnk
97/18/2022
             03:26 PM
                                     2,345 Local.lnk
                           <DIR>
07/08/2022 07:58 AM
                                            misc
```

#### del - Deletes a File

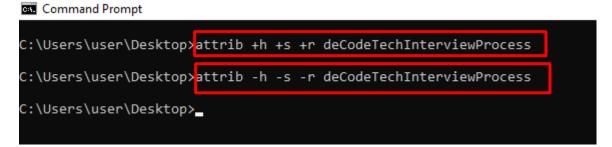
Command Prompt

```
C:\Users\user\Desktop><mark>del cls-Copy.mp4</mark>
C:\Users\user\Desktop>_
```

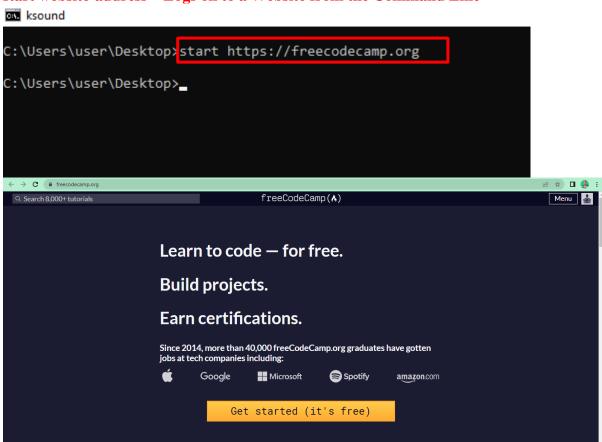
#### attrib +h +s +r folder name - Hides a Folder

You can hide a folder right from the command line by typing in attrib +h +s +r folder\_name and then pressing ENTER.

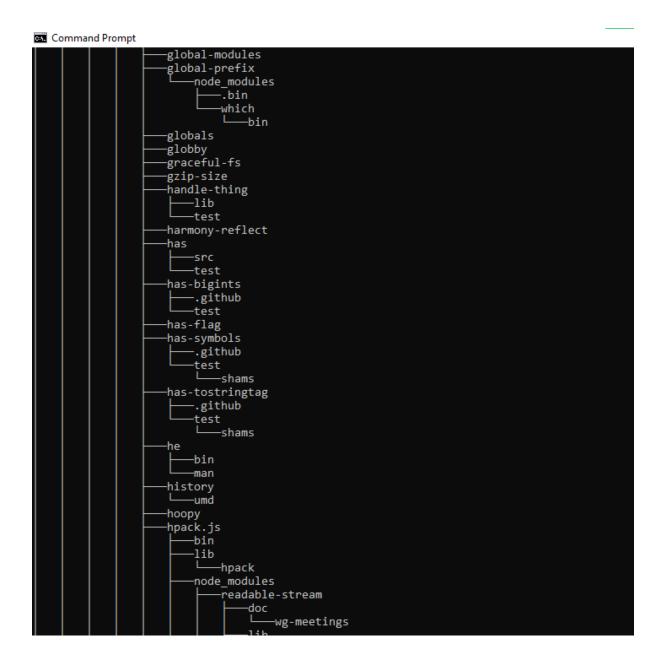
To show the folder again, execute the command – attrib -h -s -r folder\_name.



## start website-address - Logs on to a Website from the Command Line



tree - Shows the Tree of the Current Directory or Specified Drive



#### ver - Shows the Version of the OS

C:\Users\user\Desktop>ver

Microsoft Windows [Version 10.0.19044.1826]

C:\Users\user\Desktop>\_

## You can do the same thing you do with the task manager with this command:

Administrator: Command Prompt

C:\WINDOWS\system32>	tasklist				
-					
Image Name	PID	Session Name	Session#	Mem Usag	e
=======================================		=========		========	=
System Idle Process		Services	0	8	K
System	4	Services	0	3,428	K
Registry	100	Services	0	71,824	K
smss.exe	460	Services	0	904	K
csrss.exe	624	Services	0	3,636	K
csrss.exe	712	Console	1	4,768	K
wininit.exe	736	Services	0	3,612	K
services.exe	784	Services	0	8,848	K
lsass.exe	808	Services	0	20,900	K
winlogon.exe	860	Console	1	12,324	K
svchost.exe	992	Services	0	32,032	K
WUDFHost.exe	1020	Services	0	3,900	K
fontdrvhost.exe	540	Console	1	6,240	K
fontdrvhost.exe	520	Services	0	1,568	K
WUDFHost.exe	916	Services	0	10,776	K
svchost.exe	1068	Services	0	16,792	K
svchost.exe	1124	Services	0	5,840	K
dwm.exe	1232	Console	1	111,224	K
svchost.exe	1388	Services	0	3,968	K

The next command shows you how to close an open task.

## date – Shows and Changes the Current Date

Command Prompt - date

```
C:\Users\user\Desktop>date
The current date is: Tue 08/09/2022
Enter the new date: (mm-dd-yy) _
```

## time – Shows and Changes the Current Time

Command Prompt - time

```
C:\Users\user>time
The current time is: 7:50:09.95
Enter the new time: _
```

#### vol – Shows the Serial Number and Label Info of the Current Drive

Command Prompt

```
C:\Users\user\Desktop><mark>vol</mark>
Volume in drive C has no label.
Volume Serial Number is C080-FAEB
C:\Users\user\Desktop>
```

### dism - Runs the Deployment Image Service Management Tool

```
Administrator: Command Prompt
```

```
C:\WINDOWS\system32>dism
Deployment Image Servicing and Management tool
Version: 10.0.19041.844
ESCRIPTION:
   DISM enumerates, installs, uninstalls, configures, and updates features and packages in Windows images. The commands that are available depend on the image being serviced and whether the image is offline or running.
GENERIC IMAGING COMMANDS:
   /Split-Image - Splits an existing .wim file into multiple read-only split WIM (SWM) files.
/Apply-Image - Applies an image.
/Get-MountedImageInfo - Displays information about mounted WIM and VHD
                                                             images.

Images.
Displays information about images in a WIM, a VHD or a FFU file.
Saves changes to a mounted WIM or VHD image.
Unmounts a mounted WIM or VHD image.
Mounts an image from a WIM or VHD file.
Recovers an orphaned image mount directory.

    /Get-ImageInfo
    /Commit-Image
    /Unmount-Image
    /Mount-Image
    /Remount-Image
    /Cleanup-Mountpoints - Deletes resources associated with corrupted mounted images.
WIM COMMANDS:
   /Apply-CustomDataImage - Dehydrates files contained in the custom data image.
/Capture-CustomImage - Captures customizations into a delta WIM file on a
WIMBoot system. Captured directories include all
subfolders and data.
- Displays WIMBoot configuration entries for the
specified disk volume.

specified disk volume.
Updates WIMBoot configuration entry for the specified disk volume.
Displays a list of the files and folders in a specified image.
Deletes the specified volume image from a WIM file that has multiple volume images.
Exports a copy of the specified image to another file.

    /Update-WIMBootEntry
    /List-Image
    /Delete-Image
    /Export-Image
```

```
C:\Users\user\Desktop>mkdir my-folder
C:\Users\user\Desktop>
```

#### rmdir - Deletes a Folder

```
C:\Users\user\Desktop>rmdir my-folder
The directory is not empty.

C:\Users\user\Desktop>rmdir my-folder

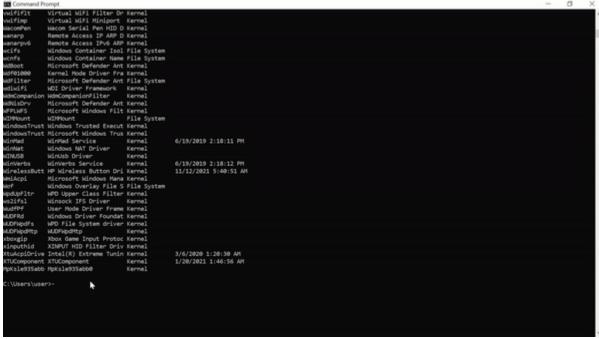
C:\Users\user\Desktop>
```

ren – Renames a File with the Syntax ren filename.extension new-name.extension

```
C:\Users\user\Desktop>ren text.txt hello.txt
C:\Users\user\Desktop>
```

#### cls - Clears the Command Line

In case you enter several commands and the command line gets clogged up, you can use cls to clear all entries and their outputs.



#### exit - Closes the Command Line

shutdown - Shuts down, Restarts, Hibernates, Sleeps the Computer

You can shut down, restart, hibernate, and sleep your PC from the command line.

Enter shutdown in the command line so you can see the extensions you can use to perform the actions. For example, shutdown /r will restart your computer.