

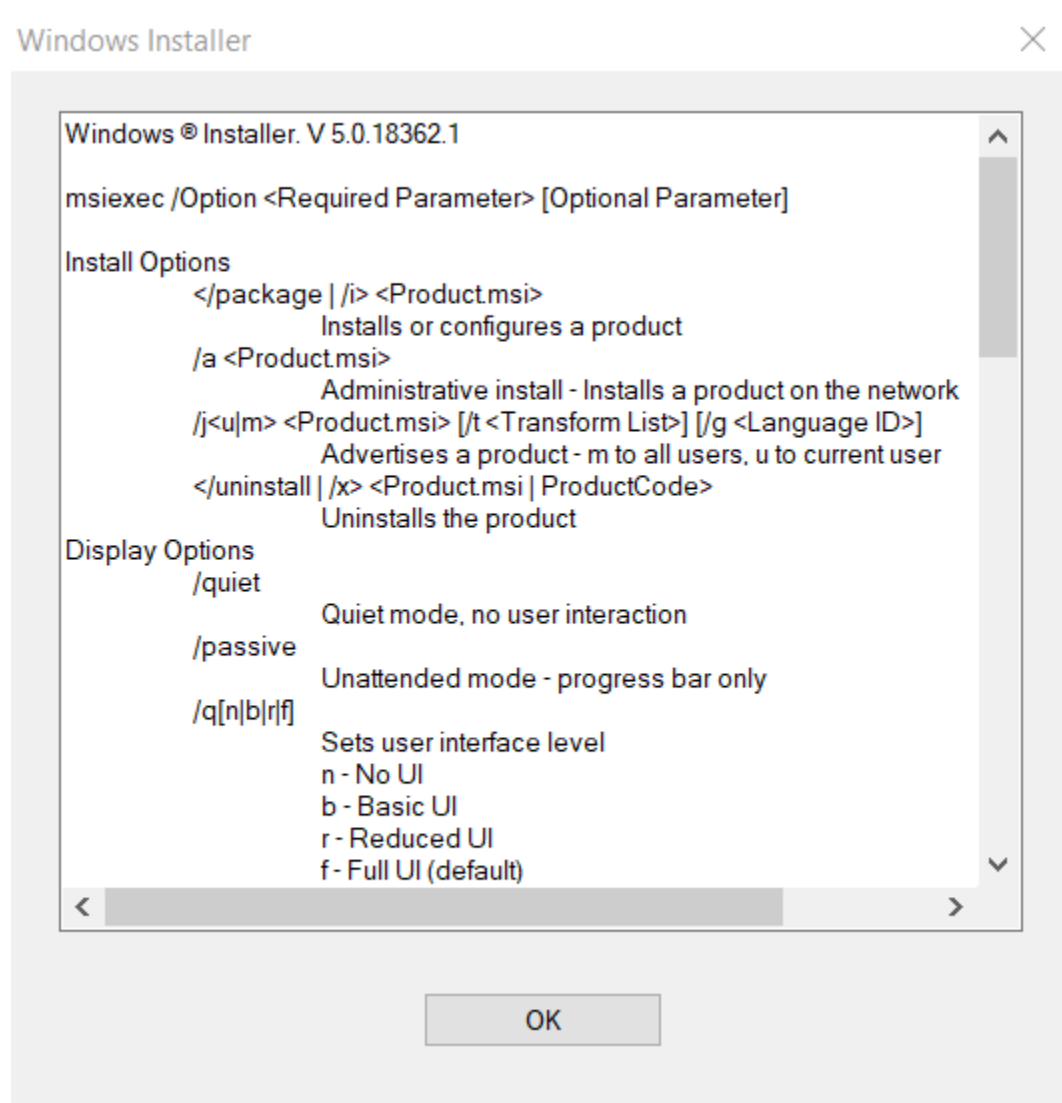
# Secure Coding

Lab 2

18BCN7088

Santhosh M

## MSIexec windows installer



## Silent Execution using msixexec

Msiexec /i <executable name> /qn /norestart

```
Command Prompt
C:\Users\santhosh\Downloads>dir *.exe
Volume in drive C is Windows
Volume Serial Number is 6260-3197

Directory of C:\Users\santhosh\Downloads

14-11-2020  07:35      940,548,560 android-studio-ide-201.6953283-windows.exe
05-02-2021  14:48       28,141,904 audacity-win-2.4.2.exe
08-11-2020  09:53     192,918,688 burpsuite_community_windows-x64_v2020_9_2.exe
01-11-2020  19:48       1,317,080 ChromeSetup.exe
04-11-2020  17:43        292,184 dxwebsetup.exe
07-11-2020  13:17       333,976 Firefox Installer.exe
16-01-2021  12:29     124,651,344 GenshinImpact_install_20201225170040.exe
05-11-2020  00:22       6,243,729 LANShare_1.2.1_setup-win64.exe
16-01-2021  22:40     134,803,456 MapLoaderInstall.exe
04-11-2020  10:42       9,308,628 nitroshare-0.3.4-windows-x86_64.exe
04-11-2020  18:48     42,680,512 radeon-software-adrenalin-2020-20.10.1-minimalsetup-201019_web.exe
01-12-2020  20:18       891,416 SpotifySetup.exe
21-12-2020  21:13     17,115,424 TLauncher-2.75-Installer-0.6.9.exe
29-01-2021  21:05     41,436,128 vlc-3.0.12-win32 (1).exe
29-01-2021  20:27     41,436,128 vlc-3.0.12-win32.exe
02-02-2021  20:40     1,408,808 vs_community__381377349.1605323438.exe
16 File(s) 1,583,527,965 bytes
0 Dir(s)  137,036,660,736 bytes free

C:\Users\santhosh\Downloads>msiexec /i "audacity-win-2.4.2.exe" /qn
C:\Users\santhosh\Downloads>msiexec /i "audacity-win-2.4.2.exe" /qn /norestart
C:\Users\santhosh\Downloads>
```

## Netuser command

```
C:\Users\santhosh>net user

User accounts for \\SANTHOSH

-----
Administrator          DefaultAccount          Guest
santhosh                WDAGUtilityAccount
The command completed successfully.

C:\Users\santhosh>
C:\Users\santhosh>
```

## Hierarchical folder display

Tree command

```
C:\Users\santhosh>
C:\Users\santhosh>tree
Folder PATH listing for volume Windows
Volume serial number is 6260-3197
C:..
  .idlerc
  .ngrok2
  .pylint.d
  .thumbnails
    fail
      blender
    large
  .tooling
    gradle
  .VirtualBox
  .vscode
    extensions
      dart-code.dart-code-3.19.2
        media
          commands
          doc-icons
            cupertino
            material
          icons
            reload_coverage
            tests
            vscode_symbols
        out
          dist
```

Listing all file formats available in system

Assoc command

```
0% Select Command Prompt
C:\Users\santhosh>assoc
.001=WinRAR
.386=vxdfile
.3ds=Photoshop.3DSFileType.90
.3g2=WMP11.AssocFile.3G2
.3ga=VLC.3ga
.3gp=WMP11.AssocFile.3GP
.3gp2=WMP11.AssocFile.3G2
.3gpp=WMP11.AssocFile.3GP
.5vw=wireshark-capture-file
.669=VLC.669
.7z=WinRAR
.8ba=Photoshop.PlugIn
.8bc=Photoshop.PlugIn
.8be=Photoshop.PlugIn
.8bf=Adobe.Photoshop.Plugin
.8bi=Adobe.Photoshop.Plugin
.8bp=Photoshop.PlugIn
.8bs=Photoshop.PlugIn
.8bx=Photoshop.PlugIn
.8by=Photoshop.PlugIn
.8li=Photoshop.PlugIn
.a52=VLC.a52
.AAC=WMP11.AssocFile.ADTS
.abr=Photoshop.BrushesFile
.acb=Adobe.Illustrator.ColorBook
.acbl=Adobe.Illustrator.ColorBook
.accountpicture-ms=accountpicturefile
.acf=Photoshop.CustomFilterKernel
.aco=Photoshop.SwatchesFile
```

Resetting time in system clock

Time command

Command Prompt - time

```
C:\Users\santhosh>time
```

```
The current time is: 17:57:56.73
```

```
Enter the new time:
```

# Redirection operators

## > operator

Takes output of a command and stores it into a file

```
Command Prompt
._vwdxsln80=VisualStudio.Launcher._vwdxsln80
._vwdxsln90=VisualStudio.Launcher._vwdxsln90
._vwinxsln120=VisualStudio.Launcher._vwinxsln120
._vwinxsln140=VisualStudio.Launcher._vwinxsln140
._vwinxsln150=VisualStudio.Launcher._vwinxsln150
._wdxsln110=VisualStudio.Launcher._wdxsln110
._wdxsln120=VisualStudio.Launcher._wdxsln120
._wdxsln140=VisualStudio.Launcher._wdxsln140
._wdxsln150=VisualStudio.Launcher._wdxsln150

D:\>dir > dir.txt

D:\>type dir.txt
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\

09-02-2021  18:06                401,408 17-Aug-2020%3fauthorizedID=18BC
13-02-2021  12:12        <DIR>          Adobestuff
01-02-2021  15:38        <DIR>          Anime
28-01-2021  15:55        <DIR>          CollegeStuff
13-02-2021  12:18                0 dir.txt
16-11-2020  21:16        <DIR>          Exploited
21-01-2021  13:45        <DIR>          games
16-11-2020  20:14        <DIR>          git
05-11-2020  20:09        <DIR>          Godfather trilogy
29-11-2018  22:53       314,756 H_I_N_A_T_A-wallpa4.jpg
04-11-2020  10:16        <DIR>          Linuxfiles
03-11-2020  22:21        <DIR>          Movies
13-11-2020  12:34        <DIR>          MSI bios update
04-11-2020  04:04        <DIR>          music
09-01-2021  14:45        <DIR>          MyStuff
24-11-2020  09:26        <DIR>          Nonsense
05-11-2020  00:05        <DIR>          old documents
05-11-2020  00:03        <DIR>          old downloads
03-11-2020  22:45        <DIR>          Photos
16-12-2020  14:29        <DIR>          Program Files
07-02-2021  16:12        <DIR>          Program Files (x86)
02-02-2021  20:51        <DIR>          ProgramData
18-12-2020  20:03        <DIR>          Santhosh
13-02-2021  12:17       17,146 types.txt
13-12-2020  18:21        <DIR>          UTORRENT
10-11-2020  20:02        <DIR>          Wallpaper
04-11-2020  04:05        <DIR>          wallpaper rajiv
04-11-2020  00:02        <DIR>          zz pendrive
          4 File(s)          733,310 bytes
        24 Dir(s)  167,948,308,480 bytes free
```

## >> operator

Takes output of a command and appends it to the end of an existing text file that has content already

```

C:\> Select Command Prompt

D:\>dir Adobestuff >> dir.txt

D:\>type dir.txt
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\

09-02-2021  18:06                401,408  17-Aug-2020%3fauthorizedID=18BC
13-02-2021  12:12        <DIR>          Adobestuff
01-02-2021  15:38        <DIR>          Anime
28-01-2021  15:55        <DIR>          CollegeStuff
13-02-2021  12:18                0  dir.txt
16-11-2020  21:16        <DIR>          Exploited
21-01-2021  13:45        <DIR>          games
16-11-2020  20:14        <DIR>          git
05-11-2020  20:09        <DIR>          Godfather trilogy
29-11-2018  22:53       314,756  H_I_N_A_T_A-wallpa4.jpg
04-11-2020  10:16        <DIR>          Linuxfiles
03-11-2020  22:21        <DIR>          Movies
13-11-2020  12:34        <DIR>          MSI bios update
04-11-2020  04:04        <DIR>          music
09-01-2021  14:45        <DIR>          MyStuff
24-11-2020  09:26        <DIR>          Nonsense
05-11-2020  00:05        <DIR>          old documents
05-11-2020  00:03        <DIR>          old downloads
03-11-2020  22:45        <DIR>          Photos
16-12-2020  14:29        <DIR>          Program Files
07-02-2021  16:12        <DIR>          Program Files (x86)
02-02-2021  20:51        <DIR>          ProgramData
18-12-2020  20:03        <DIR>          Santhosh
13-02-2021  12:17       17,146  types.txt
13-12-2020  18:21        <DIR>          UTORRENT
10-11-2020  20:02        <DIR>          Wallpaper
04-11-2020  04:05        <DIR>          wallpaper rajiv
04-11-2020  00:02        <DIR>          zz pendrive
               4 File(s)              733,310 bytes
               24 Dir(s)  167,948,308,480 bytes free
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

13-02-2021  12:12        <DIR>          .
13-02-2021  12:12        <DIR>          ..
02-02-2021  14:57        <DIR>          Bunny
13-02-2021  12:09        <DIR>          Chou
01-02-2021  17:38        <DIR>          Ling Street punk
13-02-2021  12:10        <DIR>          Thatha avva anniversary
```

In the above screenshot we can first see the output of the previous dir command and then below it we can see output of the new dir command.



## < operator

Takes input for a command from a file

```

C:\> Select Command Prompt
D:\> sort < dir.txt

         4 File(s)          733,310 bytes
         6 Dir(s) 167,948,308,480 bytes free
         6 File(s)       28,725,606 bytes
        24 Dir(s) 167,948,308,480 bytes free
Directory of D:\
Directory of D:\Adobestuff
Volume in drive D is Data
Volume in drive D is Data
Volume Serial Number is A266-8A3F
Volume Serial Number is A266-8A3F
01-02-2021  15:38    <DIR>          Anime
01-02-2021  17:38    <DIR>          Ling Street punk
02-02-2021  14:57    <DIR>          Bunny
02-02-2021  20:51    <DIR>          ProgramData
03-11-2020  22:21    <DIR>          Movies
03-11-2020  22:45    <DIR>          Photos
04-11-2020   00:02    <DIR>          zz pendrive
04-11-2020   04:04    <DIR>          music
04-11-2020   04:05    <DIR>          wallpaper rajiv
04-11-2020   10:16    <DIR>          Linuxfiles
05-09-2020   12:03             1,764,943 Zenitsu.ai
05-11-2020   00:03    <DIR>          old downloads
05-11-2020   00:05    <DIR>          old documents
05-11-2020   20:09    <DIR>          Godfather trilogy
06-09-2020   13:24             673,147 zenit sqatch.ai
06-09-2020   13:50             1,846,363 Zeni2.ai
07-02-2021   16:12    <DIR>          Program Files (x86)
07-10-2020   07:48             16,251,737 Untitled-1.ai
09-01-2021   14:45    <DIR>          MyStuff
09-02-2021   18:06             401,408 17-Aug-2020%3fauthorizedID=1
10-11-2020   20:02    <DIR>          Wallpaper
12-09-2020   12:25             3,490,134 zenps.psd
13-02-2021   12:09    <DIR>          Chou
13-02-2021   12:10    <DIR>          Thatha avva anniversary
13-02-2021   12:12    <DIR>          .
13-02-2021   12:12    <DIR>          ..
13-02-2021   12:12    <DIR>          Adobestuff
13-02-2021   12:17             17,146 types.txt
13-02-2021   12:18              0 dir.txt
13-11-2020   12:34    <DIR>          MSI bios update
13-12-2020   18:21    <DIR>          UTORRENT
16-11-2020   20:14    <DIR>          git
16-11-2020   21:16    <DIR>          Exploited
```

In the previous screenshot the contents of dir were in order, but now in the above screenshot we see it sorted line by line

| operator

Take the output of one command as input for another

```
D:\>dir | sort
```

```

                4 File(s)            735,685 bytes
                24 Dir(s)  167,948,308,480 bytes free
Directory of D:\
Volume in drive D is Data
Volume Serial Number is A266-8A3F
01-02-2021  15:38    <DIR>        Anime
02-02-2021  20:51    <DIR>        ProgramData
03-11-2020  22:21    <DIR>        Movies
03-11-2020  22:45    <DIR>        Photos
04-11-2020  00:02    <DIR>        zz pendrive
04-11-2020  04:04    <DIR>        music
04-11-2020  04:05    <DIR>        wallpaper rajiv
04-11-2020  10:16    <DIR>        Linuxfiles
05-11-2020  00:03    <DIR>        old downloads
05-11-2020  00:05    <DIR>        old documents
05-11-2020  20:09    <DIR>        Godfather trilogy
07-02-2021  16:12    <DIR>        Program Files (x86)
09-01-2021  14:45    <DIR>        MyStuff
09-02-2021  18:06            401,408 17-Aug-2020%3fauthorized
10-11-2020  20:02    <DIR>        Wallpaper
13-02-2021  12:12    <DIR>        Adobestuff
13-02-2021  12:17            17,146 types.txt
13-02-2021  12:24            2,375 dir.txt
13-11-2020  12:34    <DIR>        MSI bios update
13-12-2020  18:21    <DIR>        UTORRENT
16-11-2020  20:14    <DIR>        git
16-11-2020  21:16    <DIR>        Exploited
16-12-2020  14:29    <DIR>        Program Files
18-12-2020  20:03    <DIR>        Santhosh
21-01-2021  13:45    <DIR>        games
24-11-2020  09:26    <DIR>        Nonsense
28-01-2021  15:55    <DIR>        CollegeStuff
29-11-2018  22:53            314,756 H_I_N_A_T_A-wallpa4.jpg
```

# Directory commands

## dir and copy commands

```
C:\> Command Prompt

D:\Adobestuff>dir
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

01-02-2021  17:41    <DIR>          .
01-02-2021  17:41    <DIR>          ..
02-02-2021  14:57    <DIR>          Bunny
06-11-2020  20:11    <DIR>          Chou
01-02-2021  17:38    <DIR>          Ling Street punk
03-11-2020  22:06    <DIR>          Memory
03-11-2020  22:06    <DIR>          Thatha avva anniversary
07-10-2020  07:48      16,251,737  Untitled-1.ai
20-10-2020  12:11      4,699,282  vjs.ai
06-09-2020  13:50      1,846,363  Zeni2.ai
06-09-2020  13:24        673,147  zenit sqatch.ai
05-09-2020  12:03      1,764,943  Zenitsu.ai
12-09-2020  12:25      3,490,134  zenps.psd
             6 File(s)      28,725,606 bytes
             7 Dir(s)  167,196,233,728 bytes free

D:\Adobestuff>copy Bunny\Bunny.ai .
             1 file(s) copied.

D:\Adobestuff>dir
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

13-02-2021  12:07    <DIR>          .
13-02-2021  12:07    <DIR>          ..
02-02-2021  14:57    <DIR>          Bunny
02-02-2021  14:57      2,118,178  Bunny.ai
06-11-2020  20:11    <DIR>          Chou
01-02-2021  17:38    <DIR>          Ling Street punk
03-11-2020  22:06    <DIR>          Memory
03-11-2020  22:06    <DIR>          Thatha avva anniversary
07-10-2020  07:48      16,251,737  Untitled-1.ai
20-10-2020  12:11      4,699,282  vjs.ai
06-09-2020  13:50      1,846,363  Zeni2.ai
06-09-2020  13:24        673,147  zenit sqatch.ai
05-09-2020  12:03      1,764,943  Zenitsu.ai
12-09-2020  12:25      3,490,134  zenps.psd
             7 File(s)      30,843,784 bytes
             7 Dir(s)  167,194,112,000 bytes free
```

del command

```
Command Prompt
1 file(s) copied.

D:\Adobestuff>dir
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

13-02-2021  12:07    <DIR>          .
13-02-2021  12:07    <DIR>          ..
02-02-2021  14:57    <DIR>          Bunny
02-02-2021  14:57         2,118,178 Bunny.ai
06-11-2020  20:11    <DIR>          Chou
01-02-2021  17:38    <DIR>          Ling Street punk
03-11-2020  22:06    <DIR>          Memory
03-11-2020  22:06    <DIR>          Thatha avva anniversary
07-10-2020  07:48        16,251,737 Untitled-1.ai
20-10-2020  12:11        4,699,282 vjs.ai
06-09-2020  13:50        1,846,363 Zeni2.ai
06-09-2020  13:24         673,147 zenit sqatch.ai
05-09-2020  12:03        1,764,943 Zenitsu.ai
12-09-2020  12:25        3,490,134 zenps.psd
              7 File(s)      30,843,784 bytes
              7 Dir(s)  167,194,112,000 bytes free

D:\Adobestuff>del Bunny.ai

D:\Adobestuff>dir
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

13-02-2021  12:08    <DIR>          .
13-02-2021  12:08    <DIR>          ..
02-02-2021  14:57    <DIR>          Bunny
06-11-2020  20:11    <DIR>          Chou
01-02-2021  17:38    <DIR>          Ling Street punk
03-11-2020  22:06    <DIR>          Memory
03-11-2020  22:06    <DIR>          Thatha avva anniversary
07-10-2020  07:48        16,251,737 Untitled-1.ai
20-10-2020  12:11        4,699,282 vjs.ai
06-09-2020  13:50        1,846,363 Zeni2.ai
06-09-2020  13:24         673,147 zenit sqatch.ai
05-09-2020  12:03        1,764,943 Zenitsu.ai
12-09-2020  12:25        3,490,134 zenps.psd
              6 File(s)      28,725,606 bytes
              7 Dir(s)  167,196,233,728 bytes free
```

## xcopy command

```
Command Prompt
12-09-2020 12:25      3,490,134 zenps.psd
              7 File(s)      30,843,784 bytes
              7 Dir(s)  167,194,112,000 bytes free

D:\Adobestuff>del Bunny.ai

D:\Adobestuff>dir
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

13-02-2021 12:08      <DIR>          .
13-02-2021 12:08      <DIR>          ..
02-02-2021 14:57      <DIR>          Bunny
06-11-2020 20:11      <DIR>          Chou
01-02-2021 17:38      <DIR>          Ling Street punk
03-11-2020 22:06      <DIR>          Memory
03-11-2020 22:06      <DIR>          Thatha avva anniversary
07-10-2020 07:48      16,251,737 Untitled-1.ai
20-10-2020 12:11      4,699,282 vjs.ai
06-09-2020 13:50      1,846,363 Zeni2.ai
06-09-2020 13:24      673,147 zenit sqatch.ai
05-09-2020 12:03      1,764,943 Zenitsu.ai
12-09-2020 12:25      3,490,134 zenps.psd
              6 File(s)      28,725,606 bytes
              7 Dir(s)  167,196,233,728 bytes free

D:\Adobestuff>xcopy Bunny Chou
Bunny\Bunny.ai
1 File(s) copied

D:\Adobestuff>dir chou
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff\chou

13-02-2021 12:09      <DIR>          .
13-02-2021 12:09      <DIR>          ..
06-11-2020 20:11      4,351,837 Ballistic.ai
02-02-2021 14:57      2,118,178 Bunny.ai
21-10-2020 11:55      1,649,122 chou-iori-skin-mobile-l
21-10-2020 12:15      1,643,063 Go Ballistic.png
21-10-2020 11:53      78,078 maxresdefault.jpg
21-10-2020 11:56      100,943 wp5230278-chou-king-mua
              6 File(s)      9,941,221 bytes
              2 Dir(s)  167,194,112,000 bytes free
```

## rd command

```
D:\>cd Adobestuff

D:\Adobestuff>dir
Volume in drive D is Data
Volume Serial Number is A266-8A3F

Directory of D:\Adobestuff

13-02-2021  12:08    <DIR>        .
13-02-2021  12:08    <DIR>        ..
02-02-2021  14:57    <DIR>        Bunny
13-02-2021  12:09    <DIR>        Chou
01-02-2021  17:38    <DIR>        Ling Street punk
03-11-2020  22:06    <DIR>        Memory
03-11-2020  22:06    <DIR>        Thatha avva anniversary
07-10-2020  07:48          16,251,737 Untitled-1.ai
20-10-2020  12:11          4,699,282 vjs.ai
06-09-2020  13:50          1,846,363 Zeni2.ai
06-09-2020  13:24           673,147 zenit sqatch.ai
05-09-2020  12:03          1,764,943 Zenitsu.ai
12-09-2020  12:25          3,490,134 zenps.psd
             6 File(s)      28,725,606 bytes
             7 Dir(s)  167,194,112,000 bytes free

D:\Adobestuff>rd "Thatha avva anniversary"
The directory is not empty.

D:\Adobestuff>del "Thatha avva anniversary"\'*
D:\Adobestuff\Thatha avva anniversary\*, Are you sure (Y/N)? y

D:\Adobestuff>rd "Thatha avva anniversary"
The directory is not empty.

D:\Adobestuff>rd /a "Memory"
Invalid switch - "a".

D:\Adobestuff>rd Memory
The directory is not empty.

D:\Adobestuff>rd /s Memory
Memory, Are you sure (Y/N)? y
```