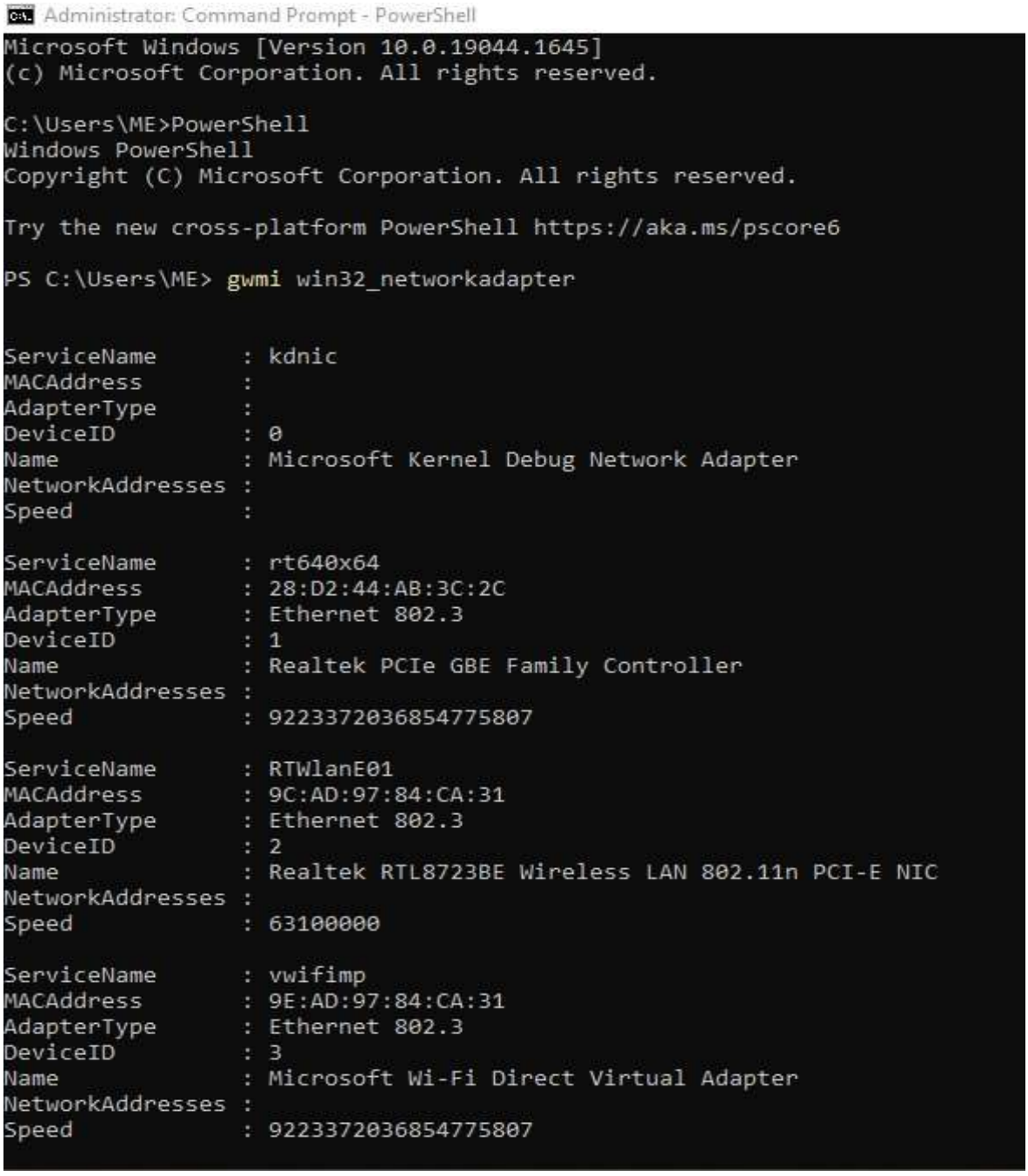
Assignments:-17

Module:- COSA(Power Shell)

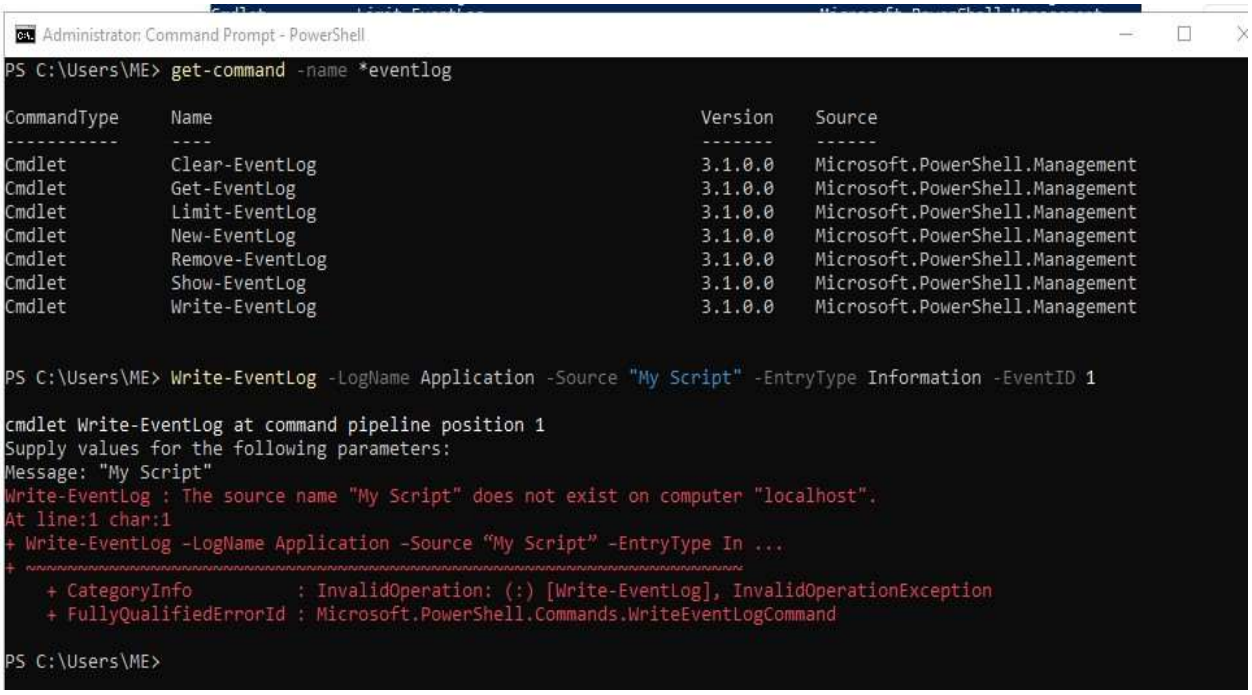
Name:- Prithviraj Nikam

Lab Assignment :-

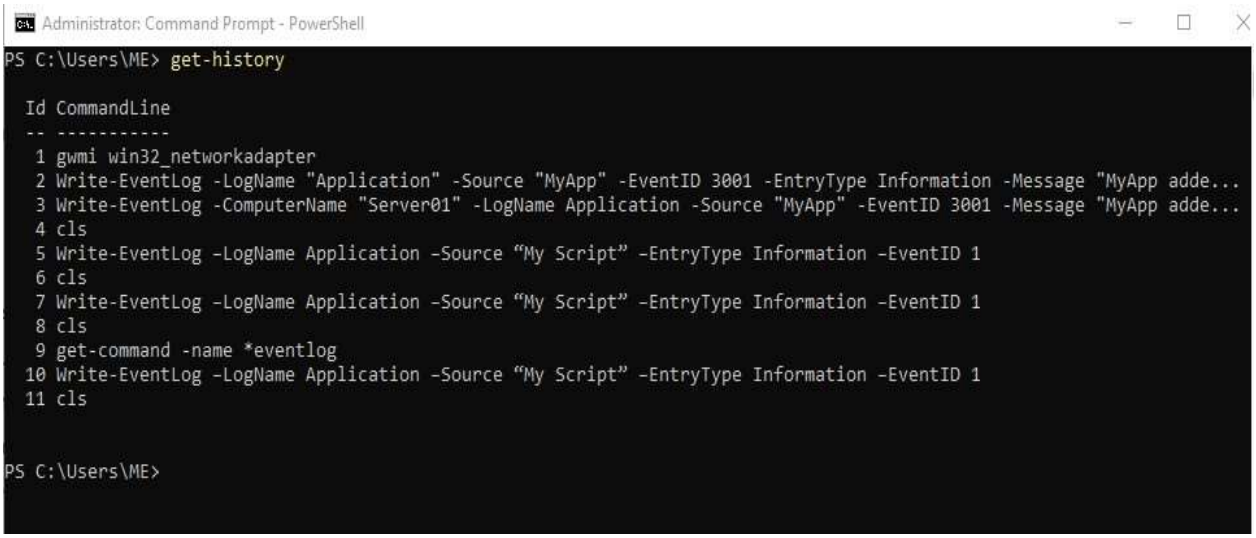
1. Find a command that lists the network adapters installed in your computer.



2. Find a command that lets you write to an event log.

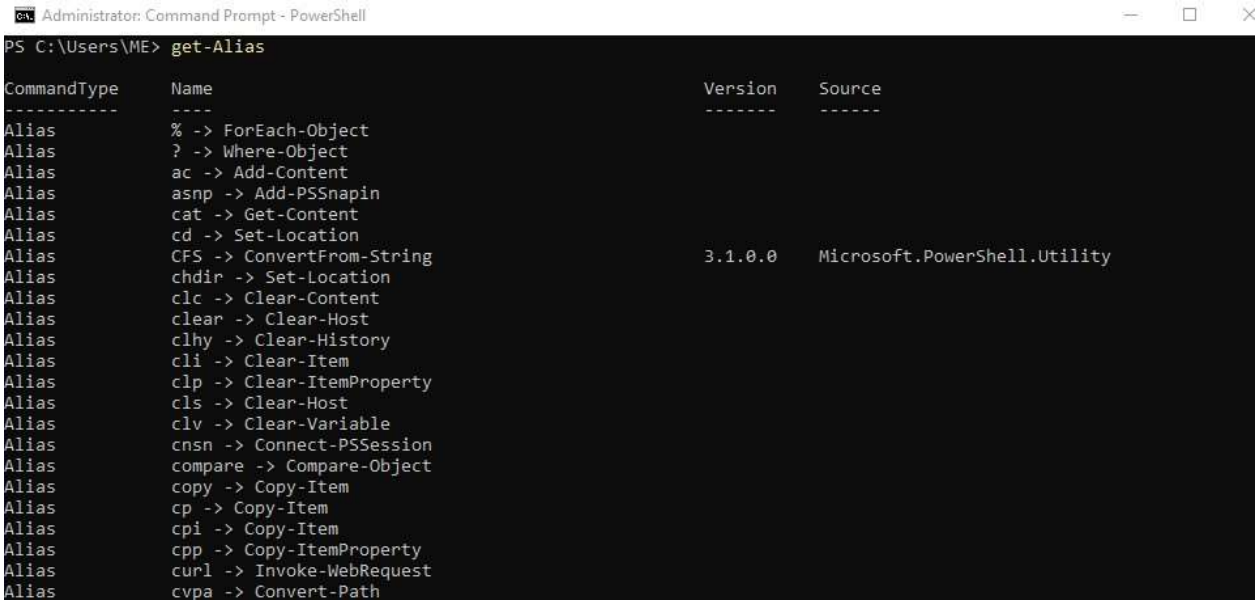


3. Find a command that lists the history of PowerShell commands that you have run in the current session

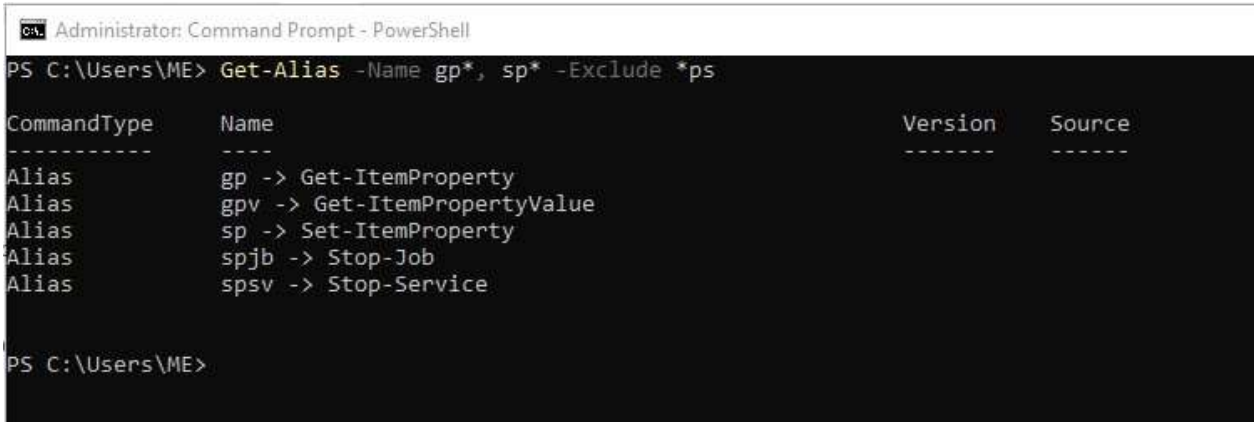


4. Find commands that will let you work with aliases in the shell.

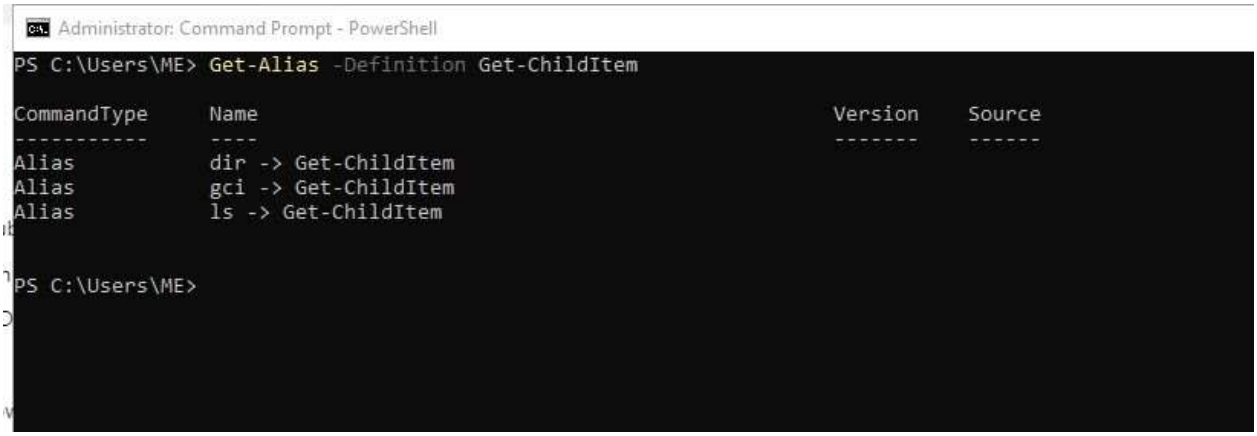
Step- 1: Get all aliases in the current session



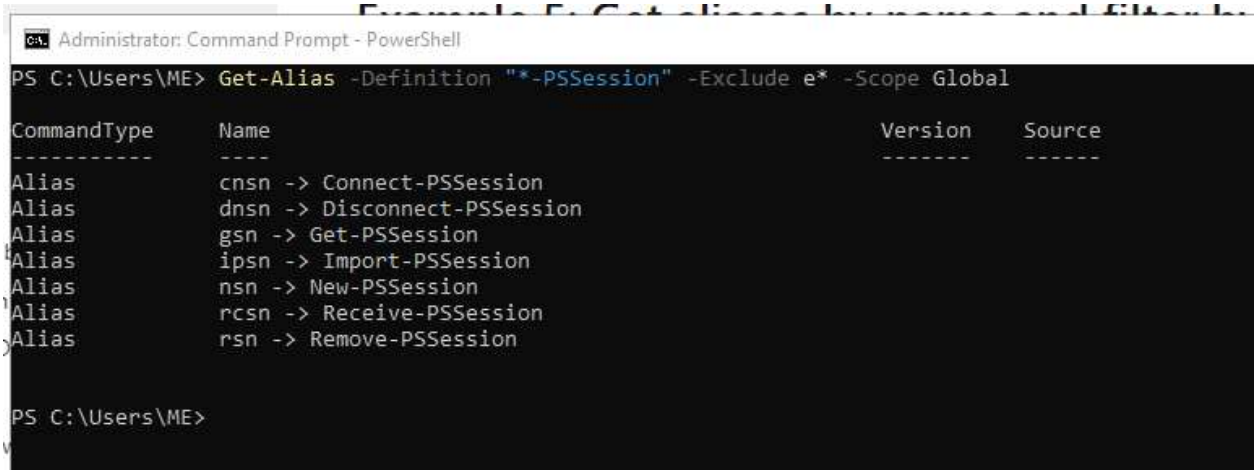
Step- 2: Get aliases by name



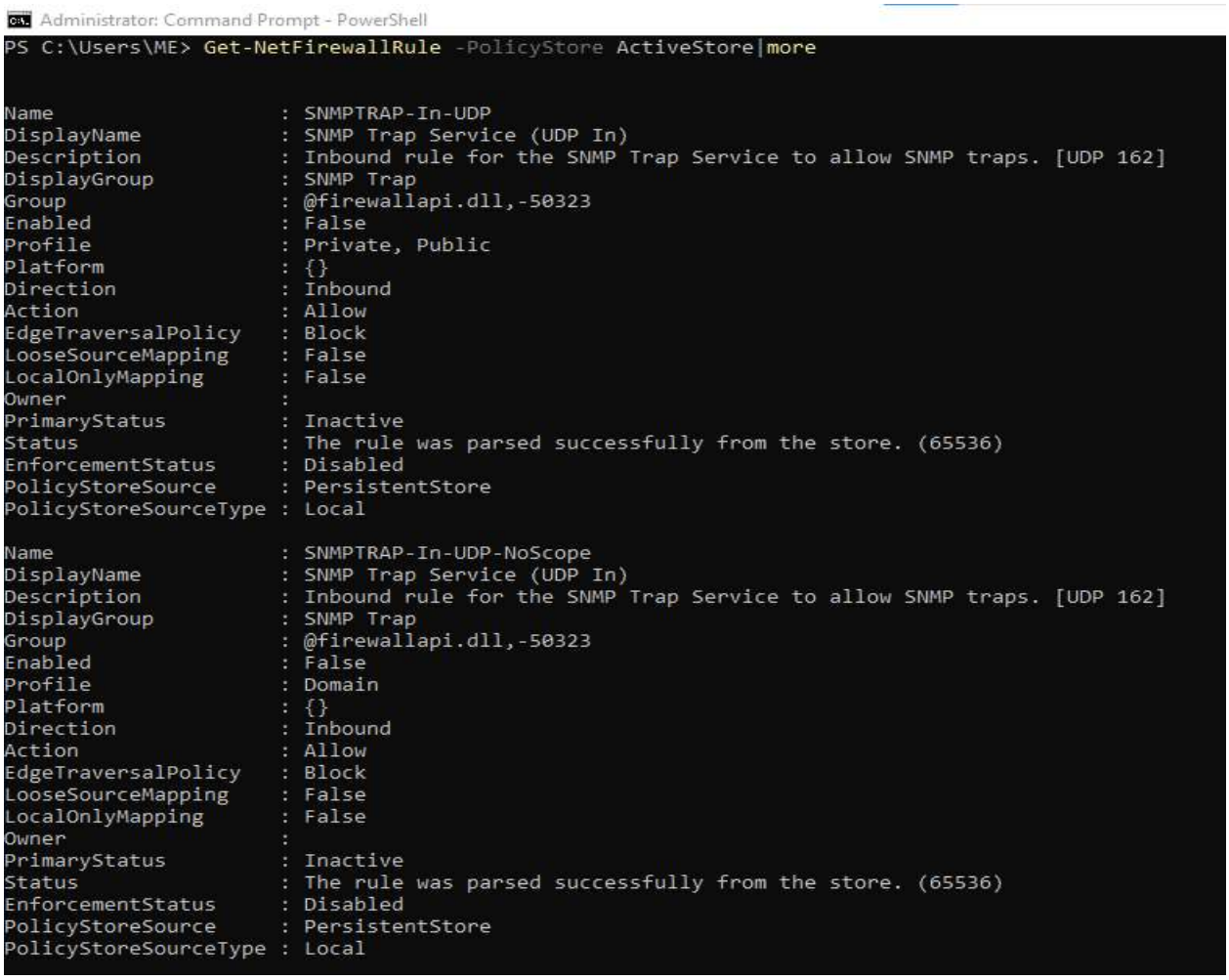
Step- 3: Get aliases for a cmdlet



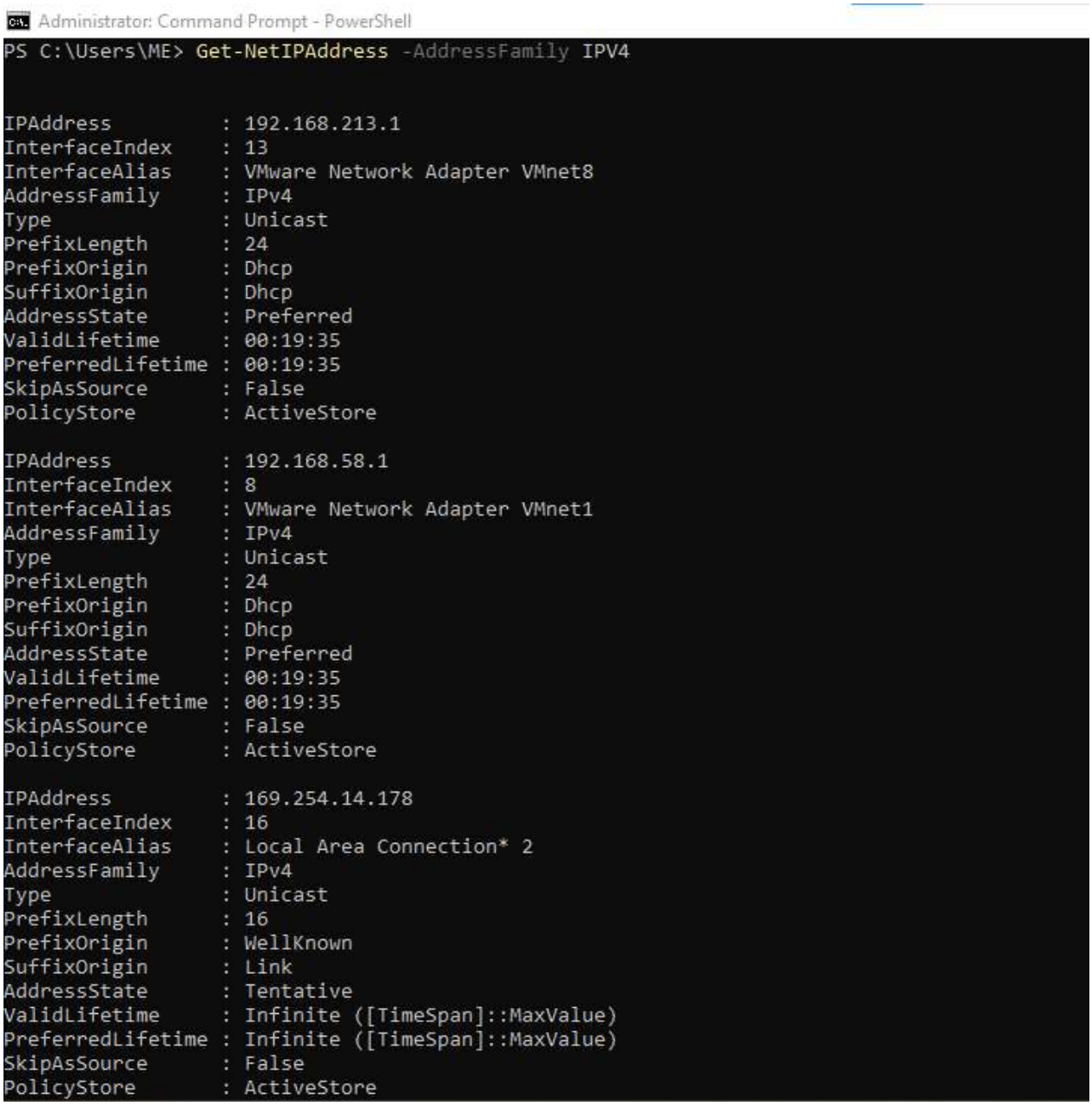
Step-4:-Get aliases by name and filter by beginning letter



5. Find a command that will list Windows Firewall rules

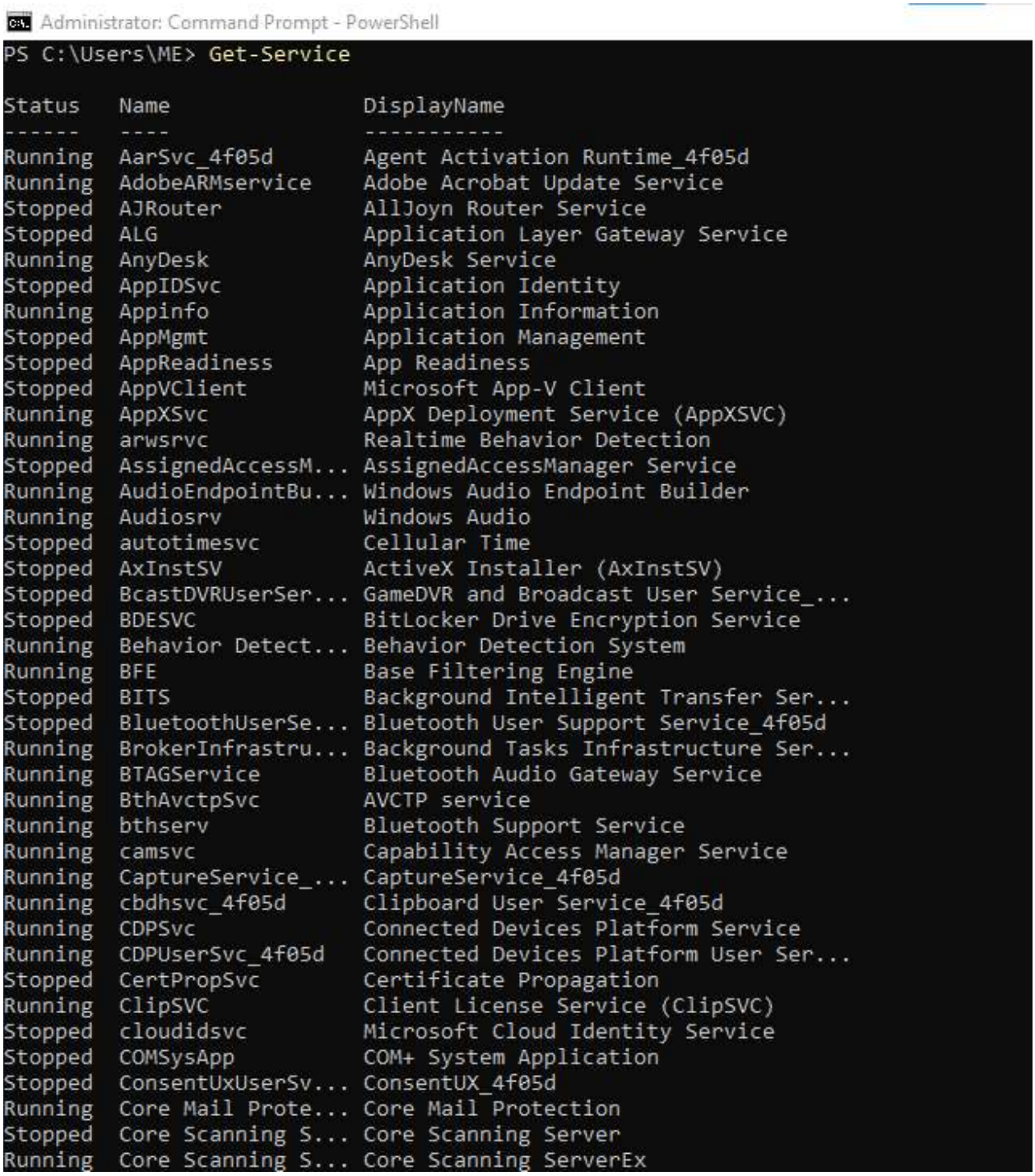


6. Find a command that will list in use IP addresses.

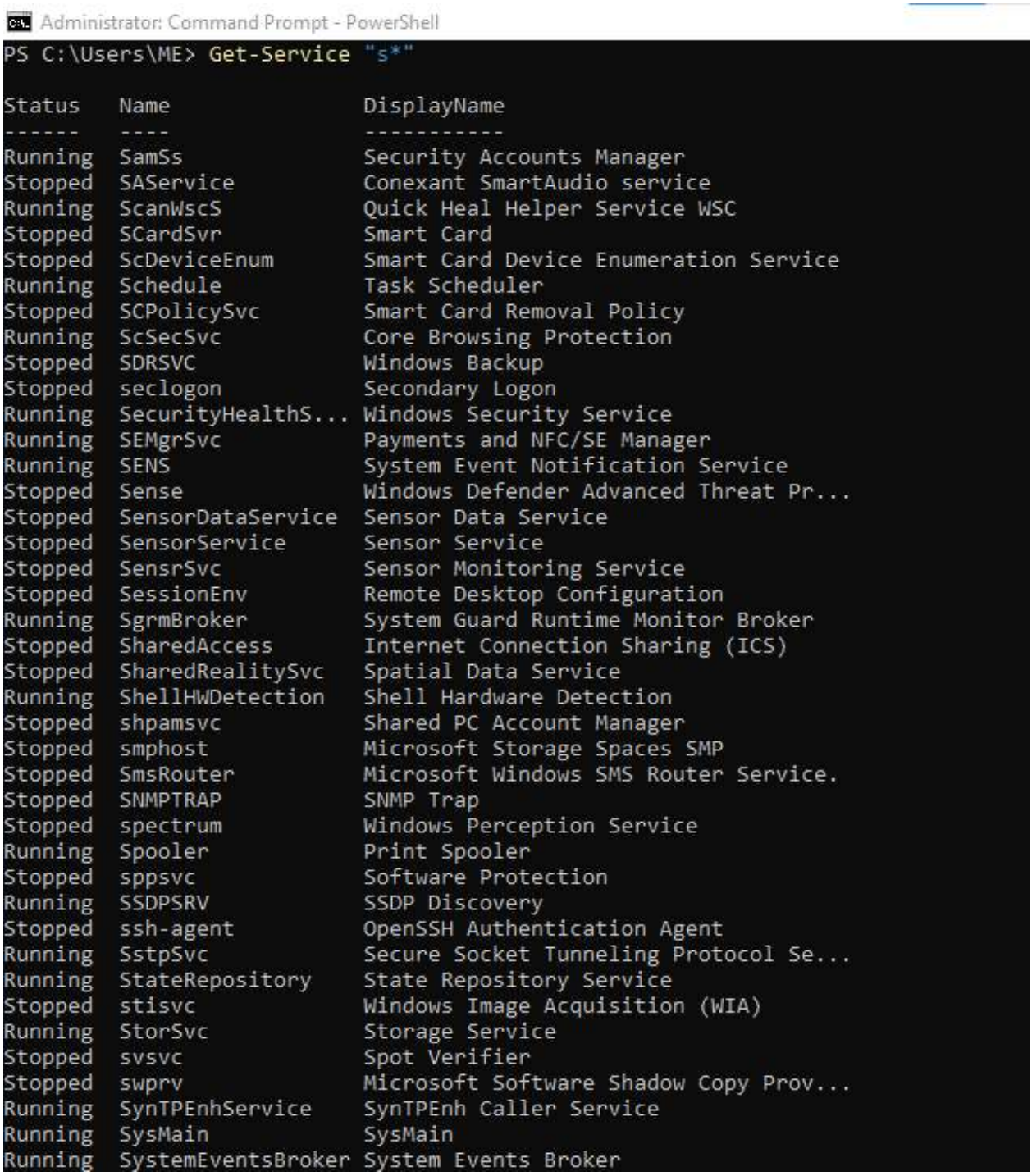


7. How would you write a command that retrieved all services whose names started with S and with W?

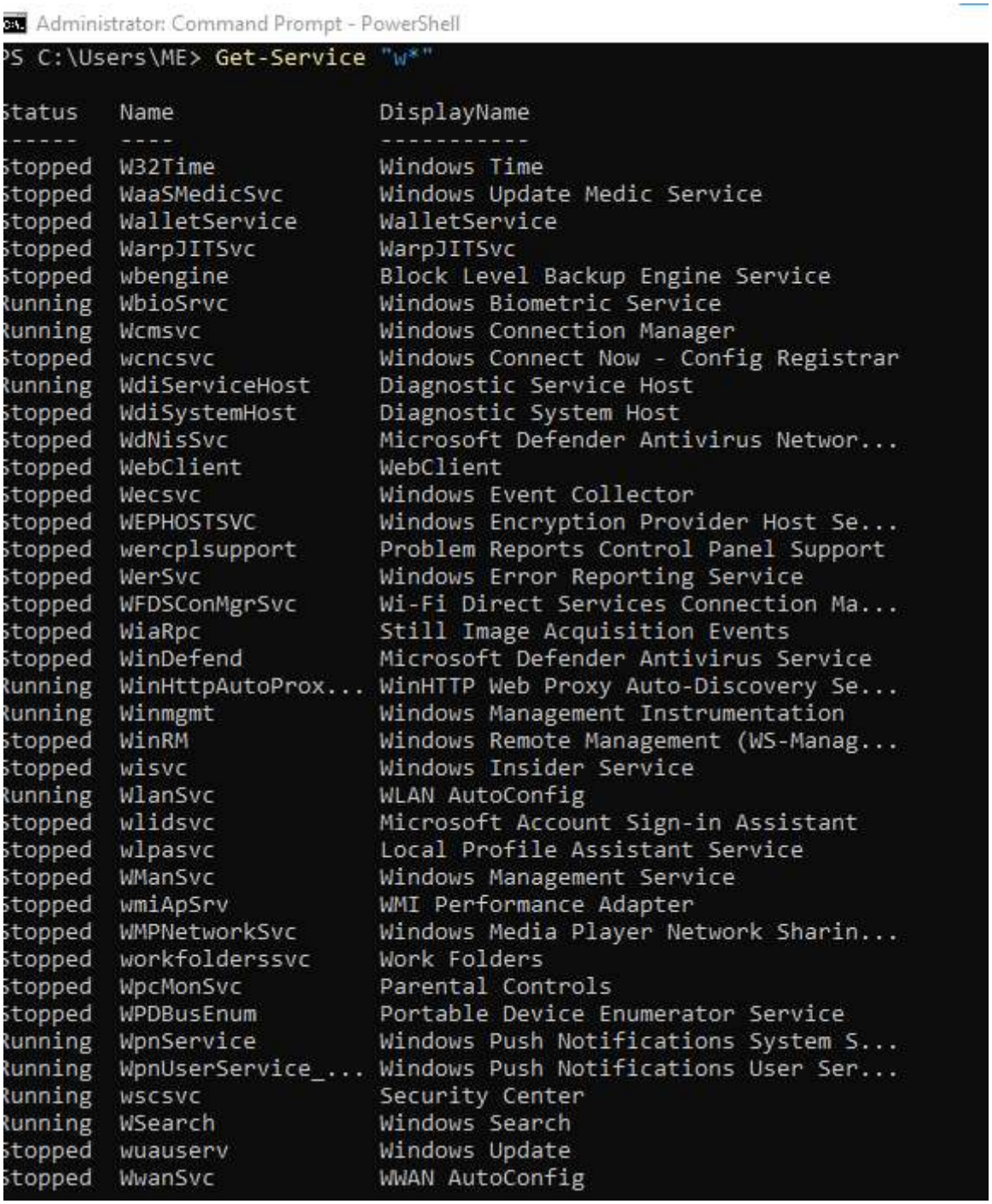
Step-1: Get all services on the computer



Step-2: Get services that begin with a search string “s”

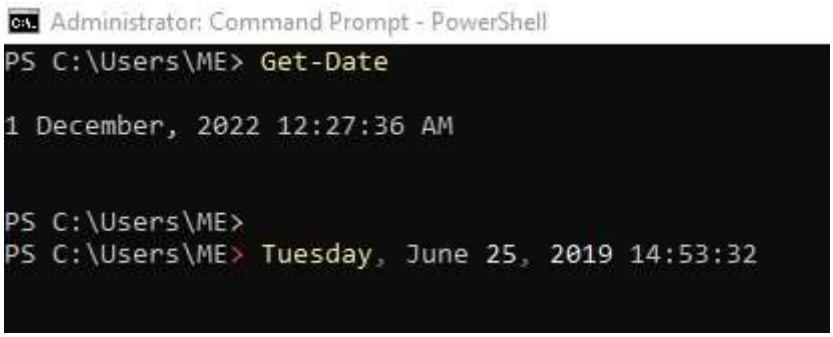

Administrator: Command Prompt - PowerShell
PS C:\Users\ME> Get-Service "s*"
Status Name DisplayName
Running SamSs Security Accounts Manager
Stopped SAService Conexant SmartAudio service
Running ScanWscS Quick Heal Helper Service WSC
Stopped SCardSvr Smart Card
Stopped ScDeviceEnum Smart Card Device Enumeration Service
Running Schedule Task Scheduler
Stopped SCPolicySvc Smart Card Removal Policy
Running ScSecSvc Core Browsing Protection
Stopped SDRSVC Windows Backup
Stopped seclogon Secondary Logon
Running SecurityHealthS... Windows Security Service
Running SEMgrSvc Payments and NFC/SE Manager
Running SENS System Event Notification Service
Stopped Sense Windows Defender Advanced Threat Pr...
Stopped SensorDataService Sensor Data Service
Stopped SensorService Sensor Service
Stopped SensrSvc Sensor Monitoring Service
Stopped SessionEnv Remote Desktop Configuration
Running SgrmBroker System Guard Runtime Monitor Broker
Stopped SharedAccess Internet Connection Sharing (ICS)
Stopped SharedRealitySvc Spatial Data Service
Running ShellHWDetection Shell Hardware Detection
Stopped shpamsvc Shared PC Account Manager
Stopped smphost Microsoft Storage Spaces SMP
Stopped SmsRouter Microsoft Windows SMS Router Service.
Stopped SNMPTRAP SNMP Trap
Stopped spectrum Windows Perception Service
Running Spooler Print Spooler
Stopped sppsvc Software Protection
Running SSDPSRV SSDP Discovery
Stopped ssh-agent OpenSSH Authentication Agent
Running SstpSvc Secure Socket Tunneling Protocol Se...
Running StateRepository State Repository Service
Stopped stisvc Windows Image Acquisition (WIA)
Running StorSvc Storage Service
Stopped svsvc Spot Verifier
Stopped swprv Microsoft Software Shadow Copy Prov...
Running SynTPEnhService SynTPEnh Caller Service
Running SysMain SysMain
Running SystemEventsBroker System Events Broker

String"W"

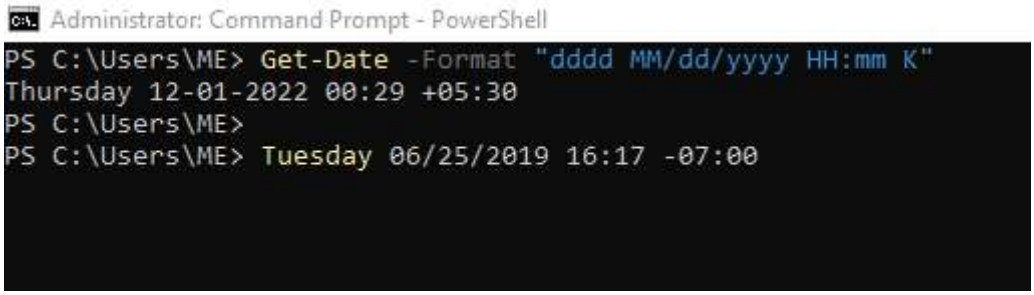


8. Find a command that produces the current date and time

Step-1: Get the current date and time

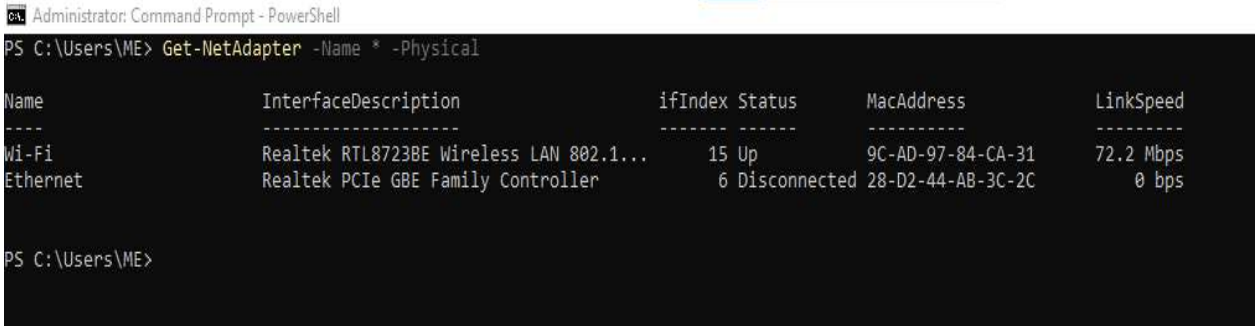


Step-2:- Get the date and time with a .NET format specifier



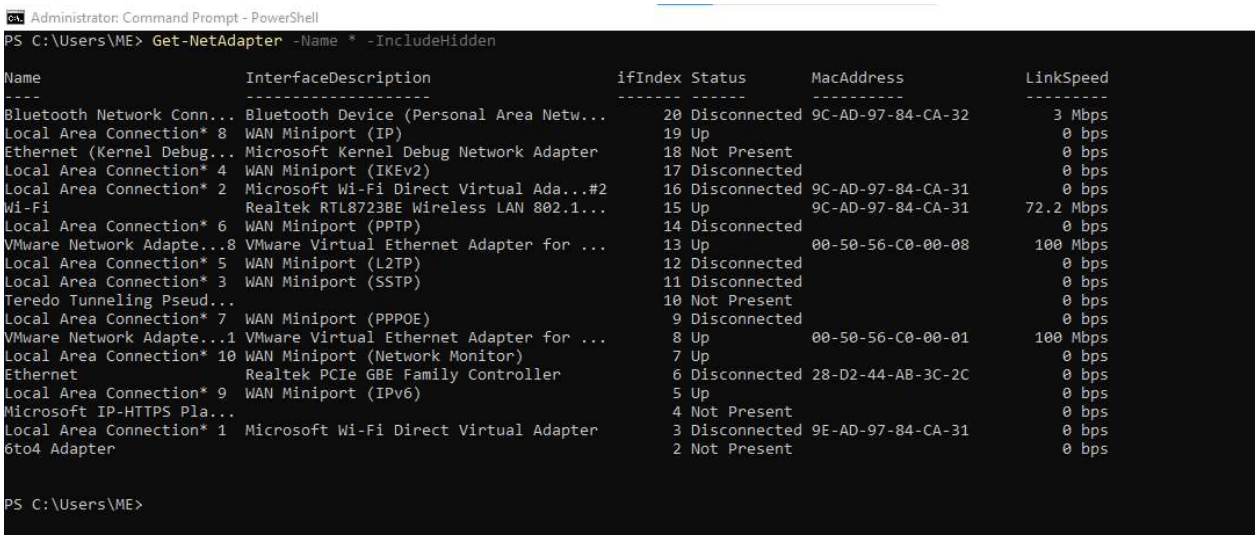
9. display a list of only physical network adapters.

Step-1:-Get all physical network adapters



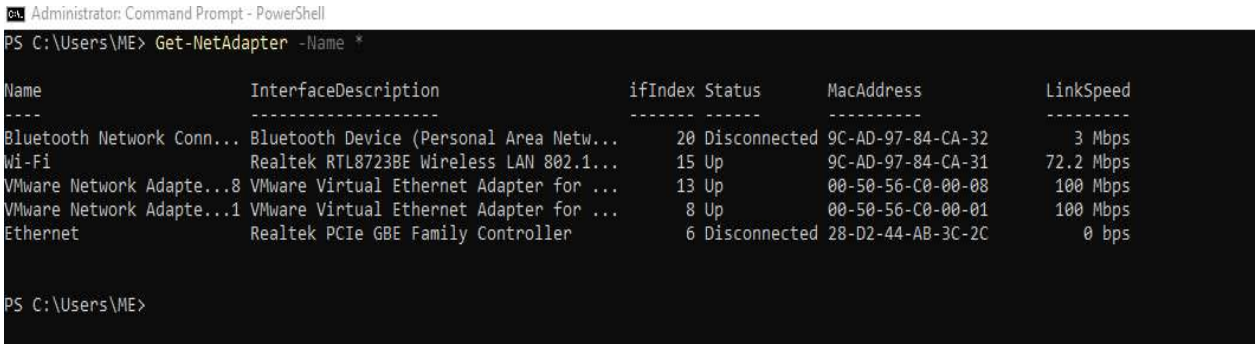
Step-2:-Get a network adapter by the specified name

Step-3:-Get all visible and hidden network adapters



```
Administrator: Command Prompt - PowerShell
PS C:\Users\ME> Get-NetAdapter -Name * -IncludeHidden

Name                      InterfaceDescription                    ifIndex Status       MacAddress             LinkSpeed
----                      --------------------                    ------- ------       ----------             ---------
Bluetooth Network Conn... Bluetooth Device (Personal Area Netw...      20 Disconnected 9C-AD-97-84-CA-32         3 Mbps
Local Area Connection* 8  WAN Miniport (IP)                           19 Up                                    0 bps
Ethernet (Kernel Debug... Microsoft Kernel Debug Network Adapter      18 Not Present                           0 bps
Local Area Connection* 4  WAN Miniport (IKEv2)                        17 Disconnected                          0 bps
Local Area Connection* 2  Microsoft Wi-Fi Direct Virtual Ada...#2     16 Disconnected 9C-AD-97-84-CA-31         0 bps
Wi-Fi                     Realtek RTL8723BE Wireless LAN 802.1...     15 Up           9C-AD-97-84-CA-31      72.2 Mbps
Local Area Connection* 6  WAN Miniport (PPTP)                         14 Disconnected                          0 bps
VMware Network Adapte...8 VMware Virtual Ethernet Adapter for ...     13 Up           00-50-56-C0-00-08       100 Mbps
Local Area Connection* 5  WAN Miniport (L2TP)                         12 Disconnected                          0 bps
Local Area Connection* 3  WAN Miniport (SSTP)                         11 Disconnected                          0 bps
Teredo Tunneling Pseud...                                             10 Not Present                           0 bps
Local Area Connection* 7  WAN Miniport (PPPOE)                         9 Disconnected                          0 bps
VMware Network Adapte...1 VMware Virtual Ethernet Adapter for ...      8 Up           00-50-56-C0-00-01       100 Mbps
Local Area Connection* 10 WAN Miniport (Network Monitor)               7 Up                                    0 bps
Ethernet                  Realtek PCIe GBE Family Controller           6 Disconnected 28-D2-44-AB-3C-2C         0 bps
Local Area Connection* 9  WAN Miniport (IPv6)                          5 Up                                    0 bps
Microsoft IP-HTTPS Pla...                                              4 Not Present                           0 bps
Local Area Connection* 1  Microsoft Wi-Fi Direct Virtual Adapter       3 Disconnected 9E-AD-97-84-CA-31         0 bps
6to4 Adapter                                                           2 Not Present                           0 bps


PS C:\Users\ME>
```

Step- 4:- Get all visible network adapters



```
Administrator: Command Prompt - PowerShell
PS C:\Users\ME> Get-NetAdapter -Name *

Name                      InterfaceDescription                    ifIndex Status       MacAddress             LinkSpeed
----                      --------------------                    ------- ------       ----------             ---------
Bluetooth Network Conn... Bluetooth Device (Personal Area Netw...      20 Disconnected 9C-AD-97-84-CA-32         3 Mbps
Wi-Fi                     Realtek RTL8723BE Wireless LAN 802.1...     15 Up           9C-AD-97-84-CA-31      72.2 Mbps
VMware Network Adapte...8 VMware Virtual Ethernet Adapter for ...     13 Up           00-50-56-C0-00-08       100 Mbps
VMware Network Adapte...1 VMware Virtual Ethernet Adapter for ...      8 Up           00-50-56-C0-00-01       100 Mbps
Ethernet                  Realtek PCIe GBE Family Controller           6 Disconnected 28-D2-44-AB-3C-2C         0 bps


PS C:\Users\ME>
```

Step- 5:- Display the common properties for the specified network adapter

```
Administrator: Command Prompt - PowerShell
PS C:\Users\ME> Get-NetAdapter -Name "Ethernet" | Format-List -Property *


MacAddress                                           : 28-D2-44-AB-3C-2C
Status                                               : Disconnected
LinkSpeed                                            : 0 bps
MediaType                                            : 802.3
PhysicalMediaType                                    : 802.3
AdminStatus                                          : Up
MediaConnectionState                                 : Disconnected
DriverInformation                                    : Driver Date 2015-05-05 Version 10.1.505.2015 NDIS 6.40
DriverFileName                                       : rt640x64.sys
NdisVersion                                          : 6.40
ifOperStatus                                         : Down
ifAlias                                              : Ethernet
InterfaceAlias                                       : Ethernet
ifIndex                                              : 6
ifDesc                                               : Realtek PCIe GBE Family Controller
ifName                                               : ethernet_32769
DriverVersion                                        : 10.1.505.2015
LinkLayerAddress                                     : 28-D2-44-AB-3C-2C
Caption                                              :
Description                                          :
ElementName                                          :
InstanceID                                           : {4AD7EDCA-1E28-489F-8E66-BE5E6BF36FA4}
CommunicationStatus                                  :
DetailedStatus                                       :
HealthState                                          :
InstallDate                                          :
Name                                                 : Ethernet
OperatingStatus                                      :
OperationalStatus                                    :
```

10.display a list of drives that use the FileSystem PSProvider.

Step-1:-Get drives in the current session

```
Administrator: Command Prompt - PowerShell
PS C:\Users\ME> Get-PSDrive

Name           Used (GB)     Free (GB) Provider      Root                                                                                 CurrentLocation
----           ---------     --------- --------      ----                                                                                 ---------------
Alias                                  Alias
C                 123.97        168.44 FileSystem    C:\                                                                                        Users\ME
Cert                                   Certificate   \
D                  47.80        136.17 FileSystem    D:\
E                   0.10         58.49 FileSystem    E:\
Env                                    Environment
F                  86.20         50.52 FileSystem    F:\
Function                               Function
G                 110.19         26.53 FileSystem    G:\
H                 108.92         24.81 FileSystem    H:\
HKCU                                   Registry      HKEY_CURRENT_USER
HKLM                                   Registry      HKEY_LOCAL_MACHINE
Variable                               Variable
WSMan                                  WSMan
```

Step-2:- Get a drive on the computer

```
Administrator: Command Prompt - PowerShell
PS C:\Users\ME> get-psdrive D

Name           Used (GB)     Free (GB) Provider      Root                                                                                 CurrentLocation
----           ---------     --------- --------      ----                                                                                 ---------------
D                  47.80        136.17 FileSystem    D:\


PS C:\Users\ME>
```

Step-3:-Get all the drives that are supported by the Windows PowerShell file system provider

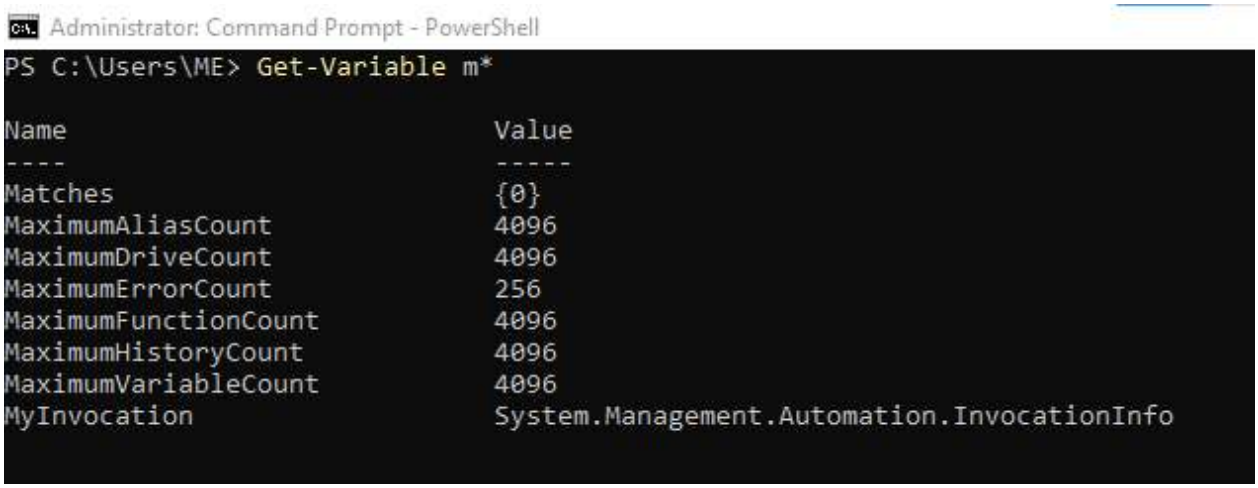
```
PS C:\Users\ME> Get-PSDrive -PSProvider FileSystem

Name           Used (GB)     Free (GB) Provider      Root                                                                               CurrentLocation
----           ---------     --------- --------      ----                                                                               ---------------
C                 123.97        168.43 FileSystem    C:\                                                                                      Users\ME
D                  47.80        136.17 FileSystem    D:\
E                   0.10         58.49 FileSystem    E:\
F                  86.20         50.52 FileSystem    F:\
G                 110.19         26.53 FileSystem    G:\
H                 108.92         24.81 FileSystem    H:\
```

11.Display a list of Windows Firewall rules that are enabled.

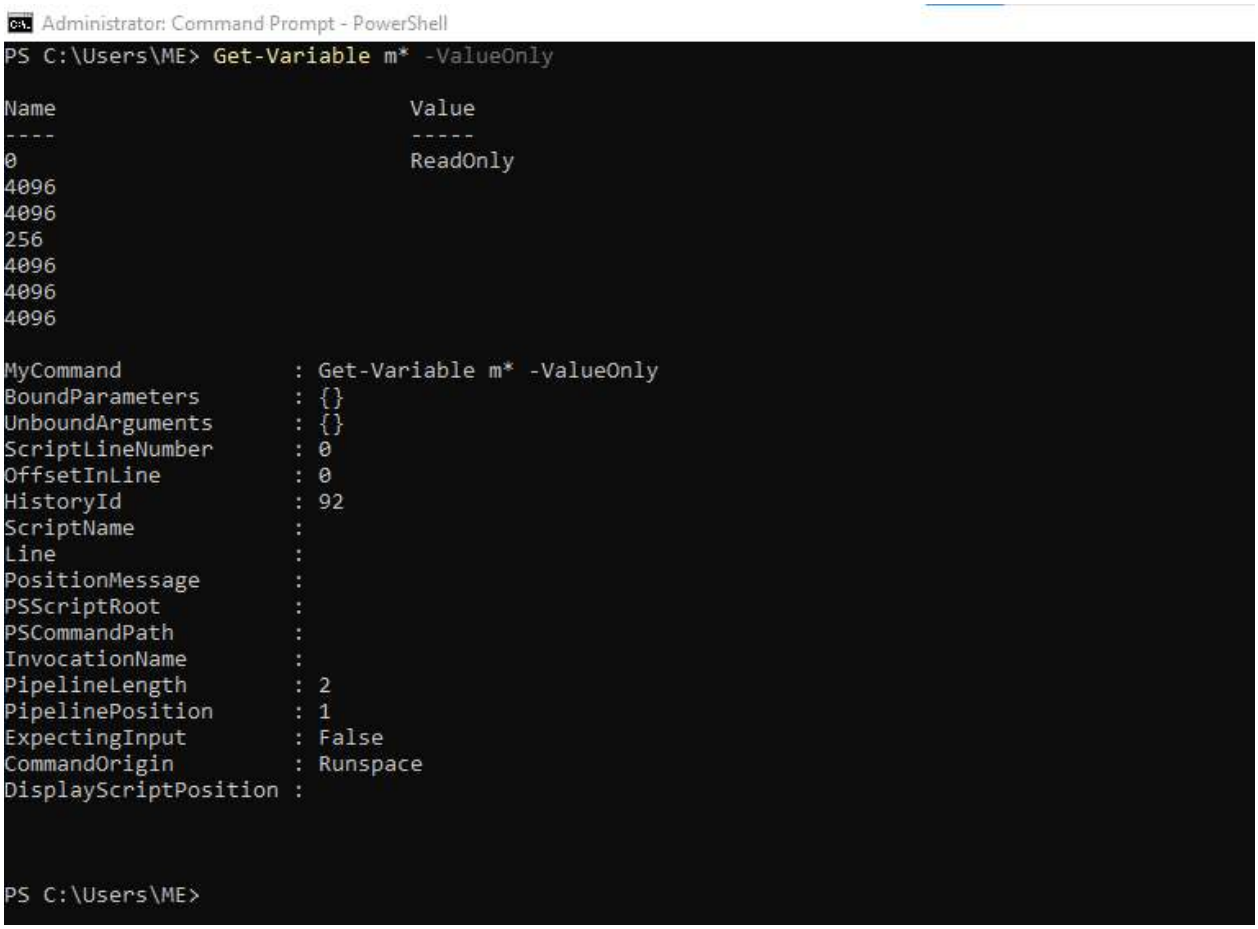
```
Administrator: Command Prompt - PowerShell
PS C:\Users\ME> Get-NetFirewallRule -PolicyStore ActiveStore|more


Name                  : SNMPTRAP-In-UDP
DisplayName           : SNMP Trap Service (UDP In)
Description           : Inbound rule for the SNMP Trap Service to allow SNMP traps. [UDP 162]
DisplayGroup          : SNMP Trap
Group                 : @firewallapi.dll,-50323
Enabled               : False
Profile               : Private, Public
Platform              : {}
Direction             : Inbound
Action                : Allow
EdgeTraversalPolicy   : Block
LooseSourceMapping    : False
LocalOnlyMapping      : False
Owner                 :
PrimaryStatus         : Inactive
Status                : The rule was parsed successfully from the store. (65536)
EnforcementStatus     : Disabled
PolicyStoreSource     : PersistentStore
PolicyStoreSourceType : Local

Name                  : SNMPTRAP-In-UDP-NoScope
DisplayName           : SNMP Trap Service (UDP In)
Description           : Inbound rule for the SNMP Trap Service to allow SNMP traps. [UDP 162]
DisplayGroup          : SNMP Trap
Group                 : @firewallapi.dll,-50323
Enabled               : False
Profile               : Domain
Platform              : {}
Direction             : Inbound
Action                : Allow
EdgeTraversalPolicy   : Block
LooseSourceMapping    : False
LocalOnlyMapping      : False
Owner                 :
PrimaryStatus         : Inactive
Status                : The rule was parsed successfully from the store. (65536)
EnforcementStatus     : Disabled
PolicyStoreSource     : PersistentStore
PolicyStoreSourceType : Local
```

12.Display a list of all currently defined variables.

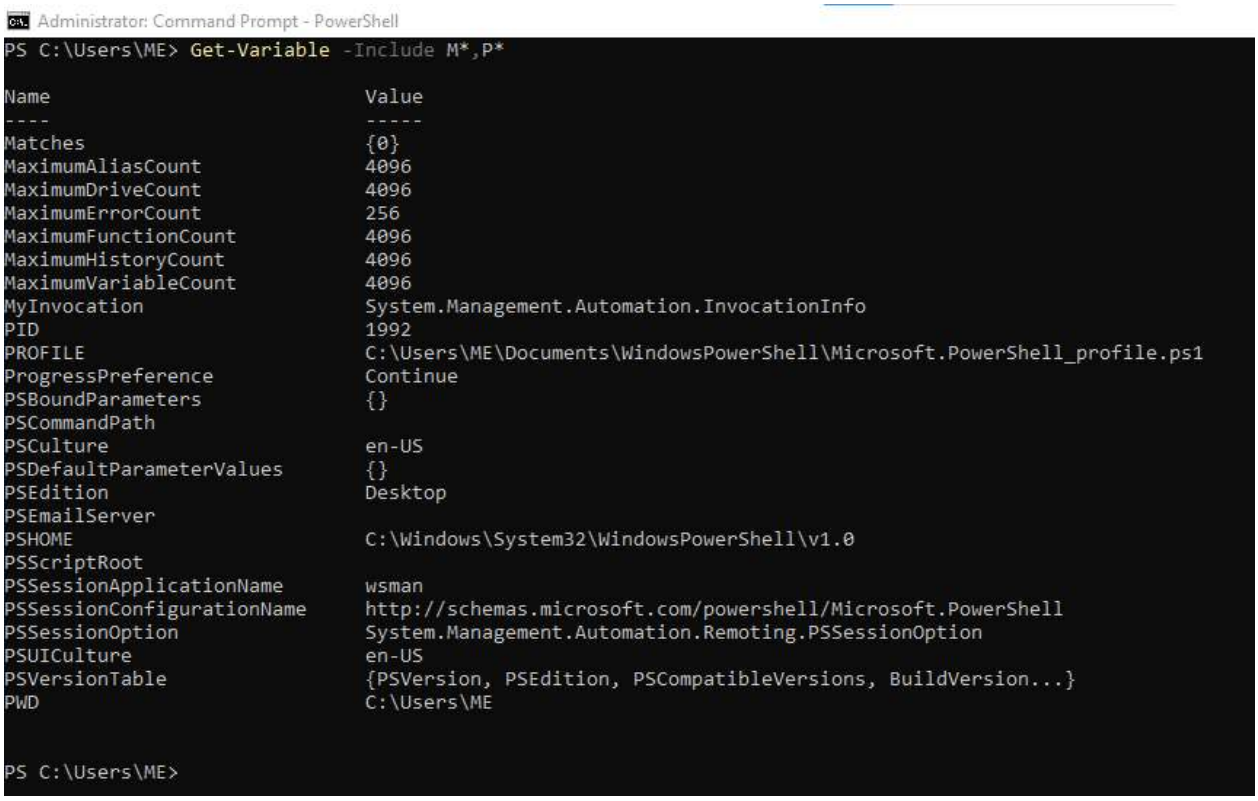
Step-1:-Get variables by letter



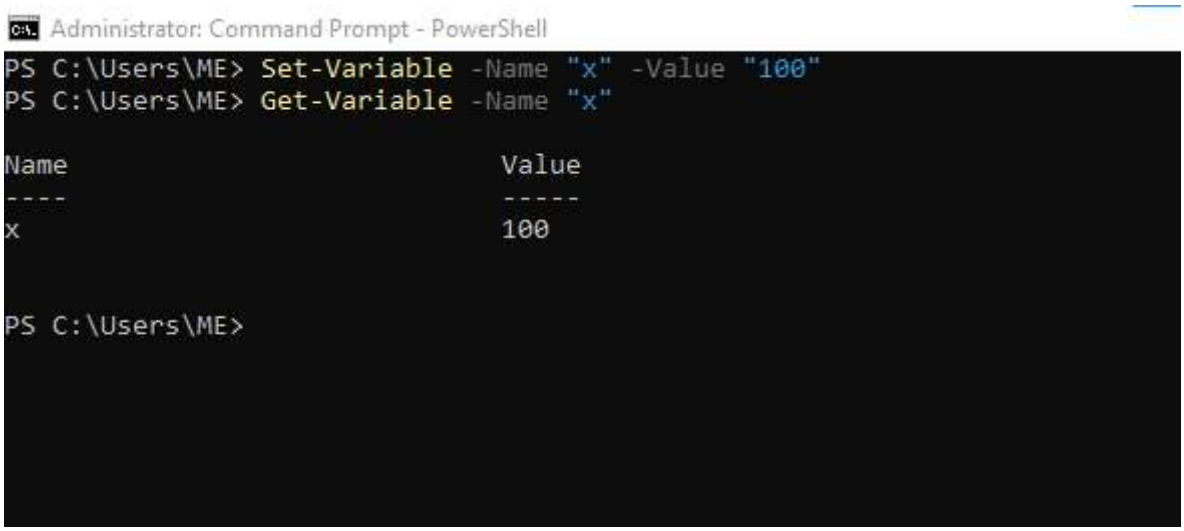
Step-2:- Get variable values by letter



Step-3:-Get variables by two letters



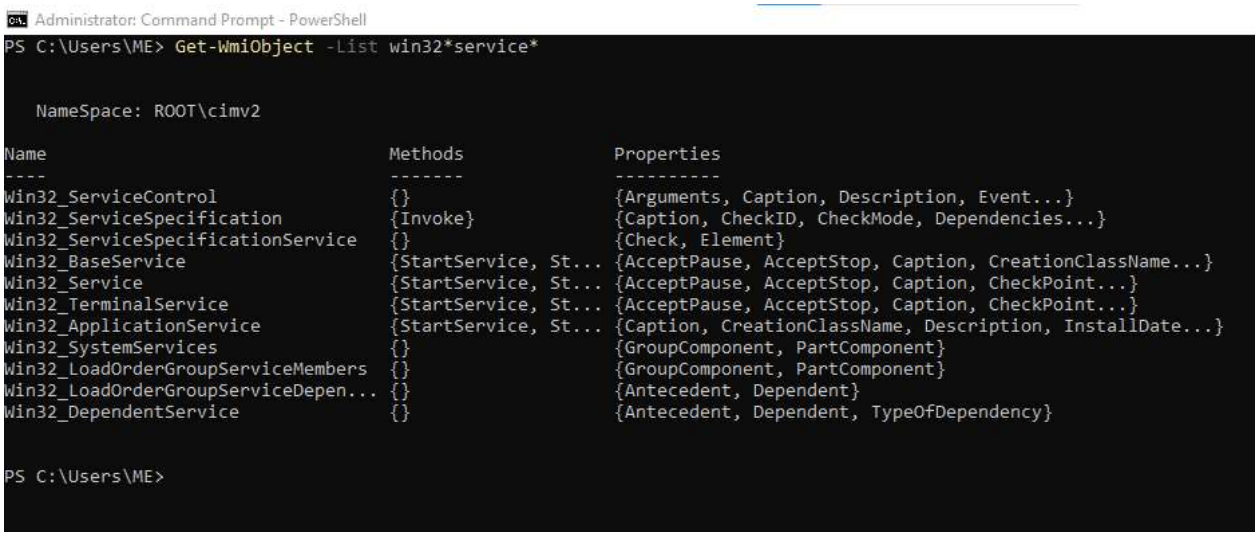
13.Create a variable named x and populate it with the number 100.



14.Completely remove the variable named x.

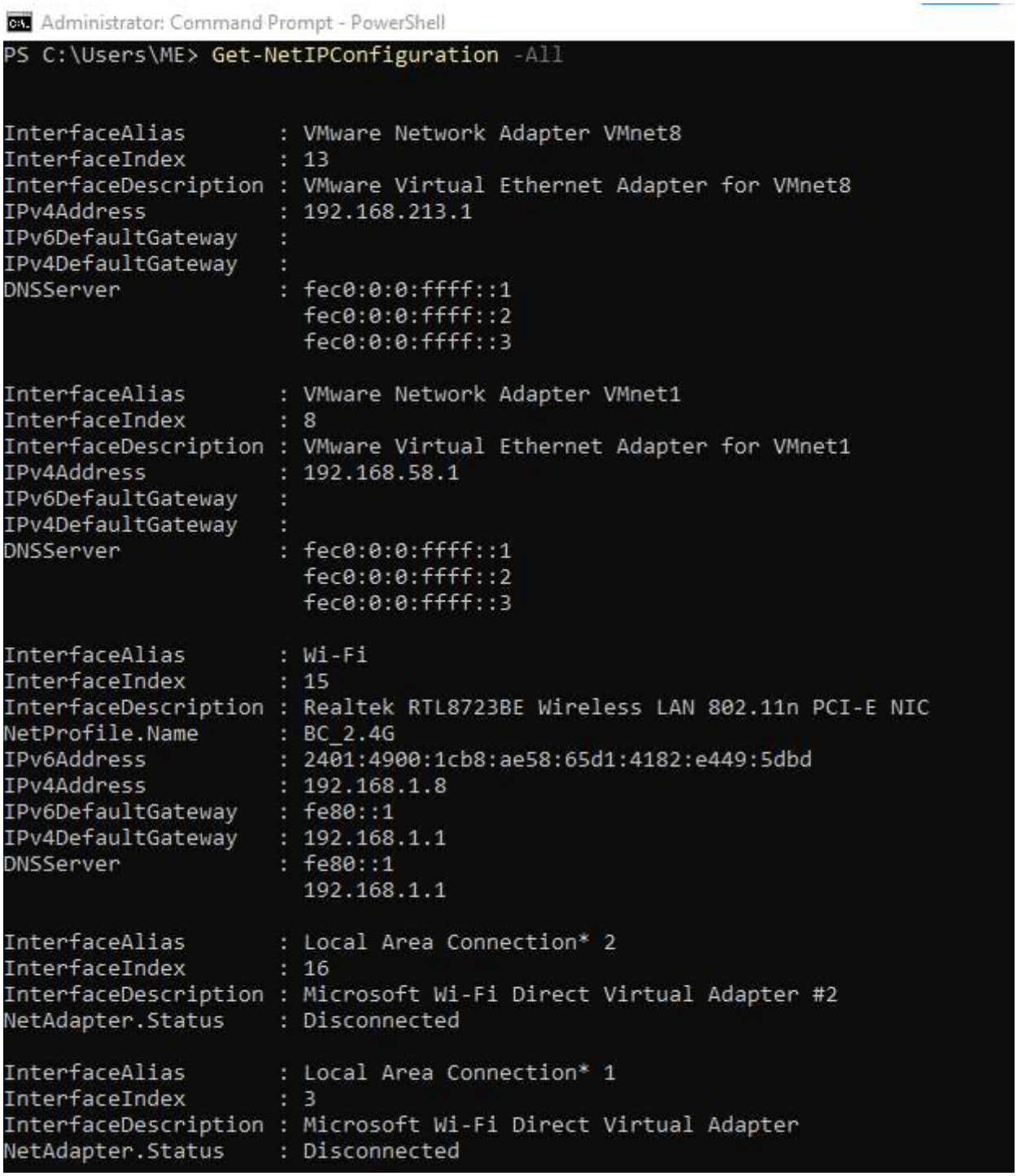
15.Place all running processes into a new variable named procs.

16.Using the Win32_Service class, display a list of services that are set to start automatically, but that are not currently running

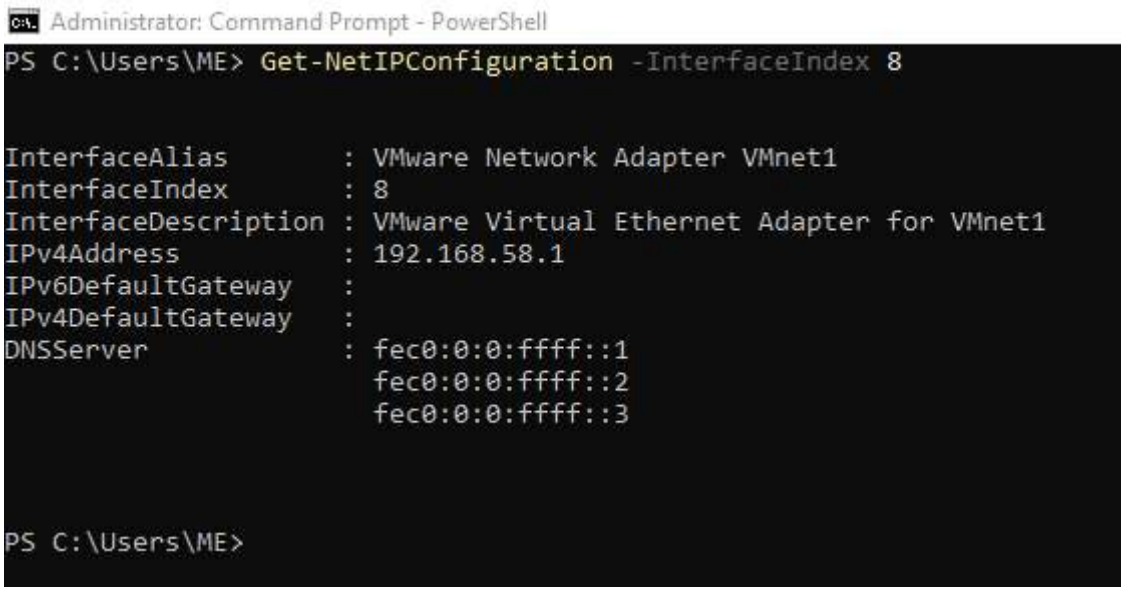


17.Display a list of configurations where DHCP is enabled. Display only the interface index and description of each

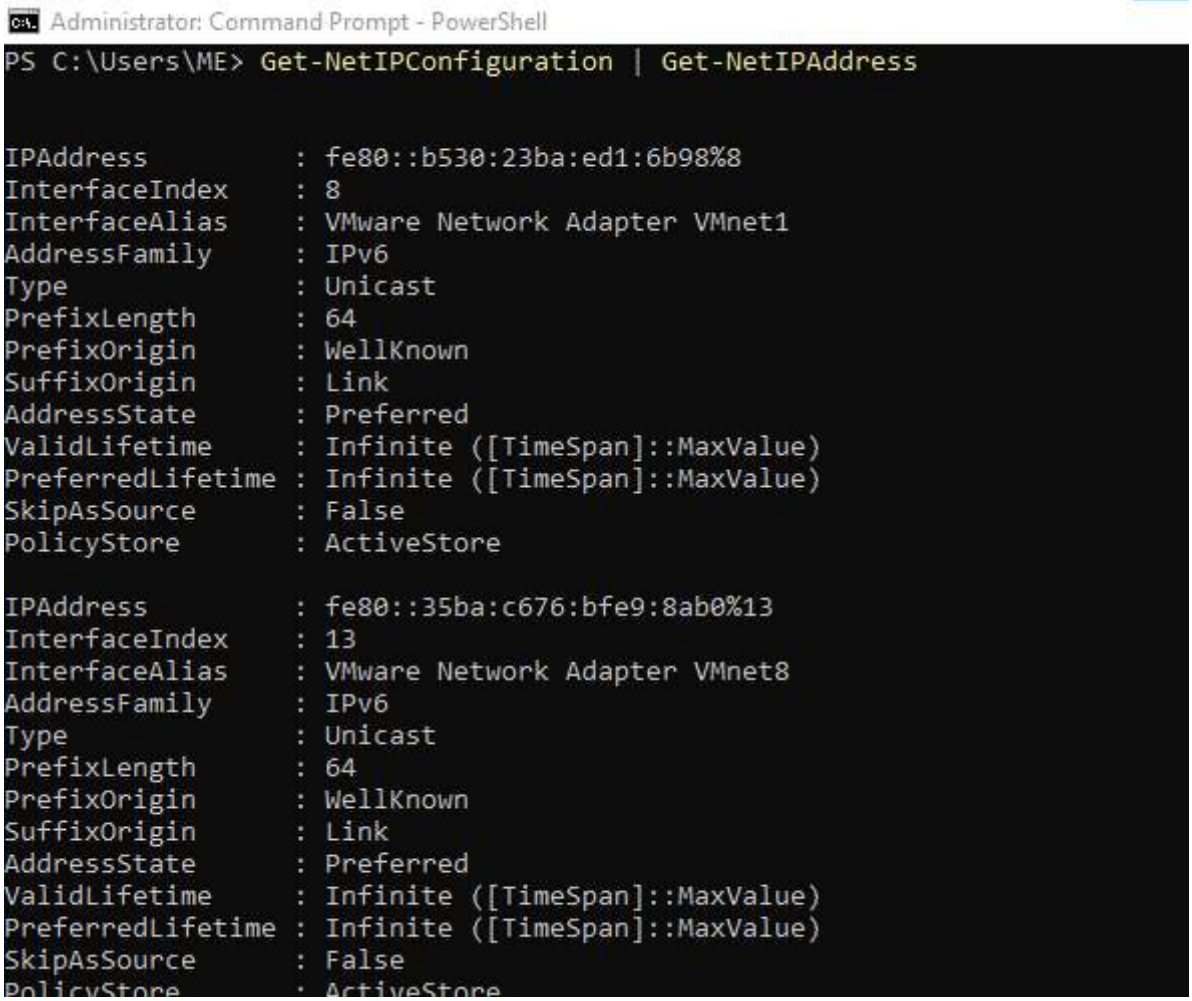
Step-1:-Get all IP configuration details



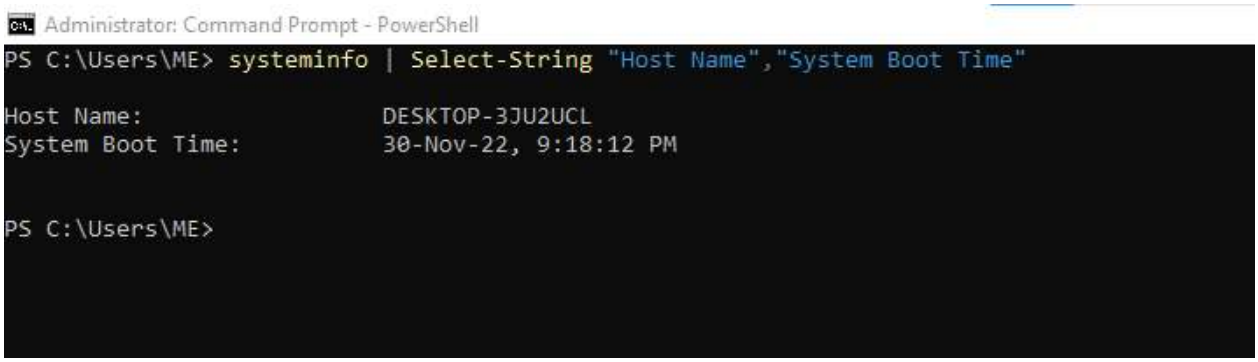
Step-2:- Get the IP configuration by interface index



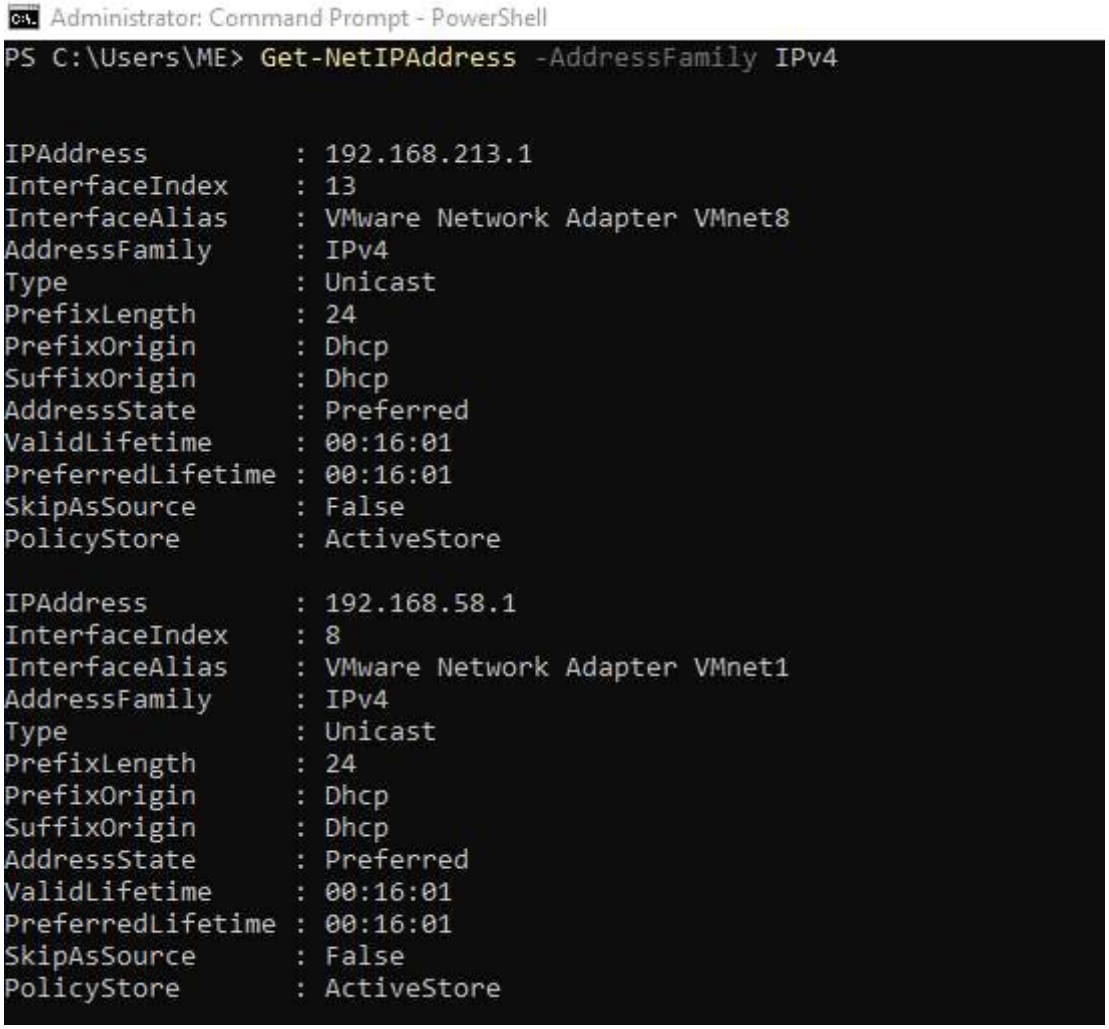
Step-3:-Get the IP configuration from pipeline input



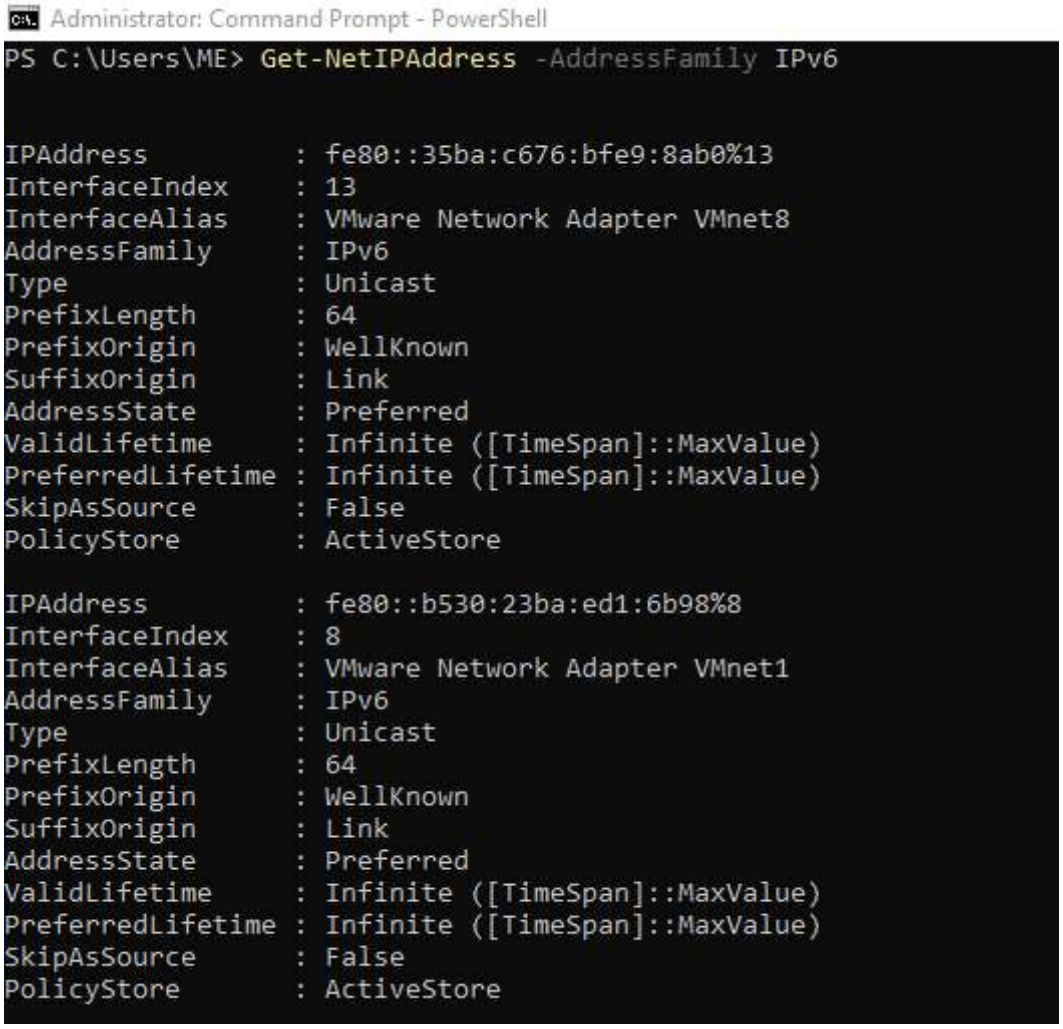
18.Display computers' last boot up time



19.Run a command that will display all local IPv4 addresses for all network adapters.

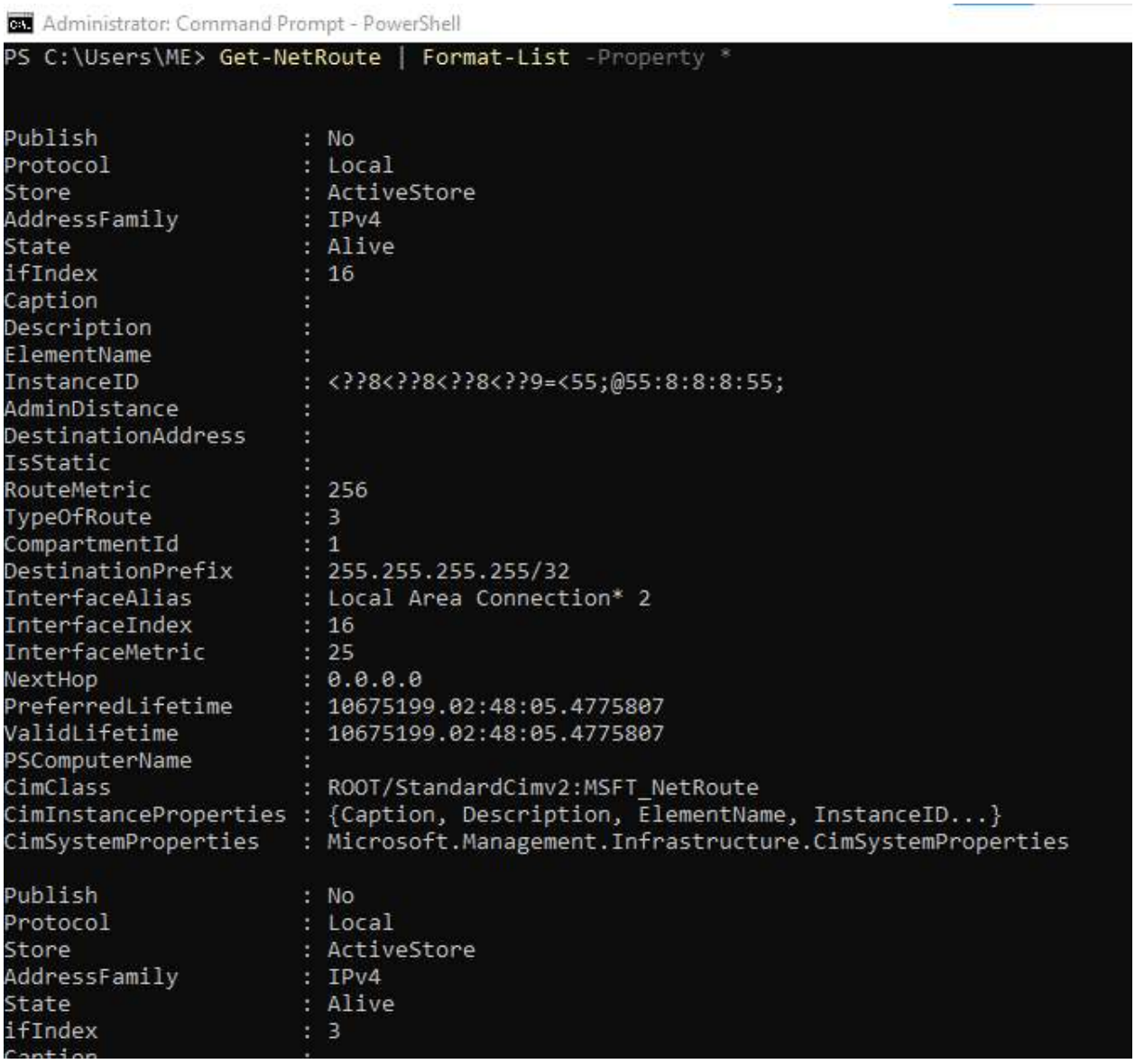


IPv6

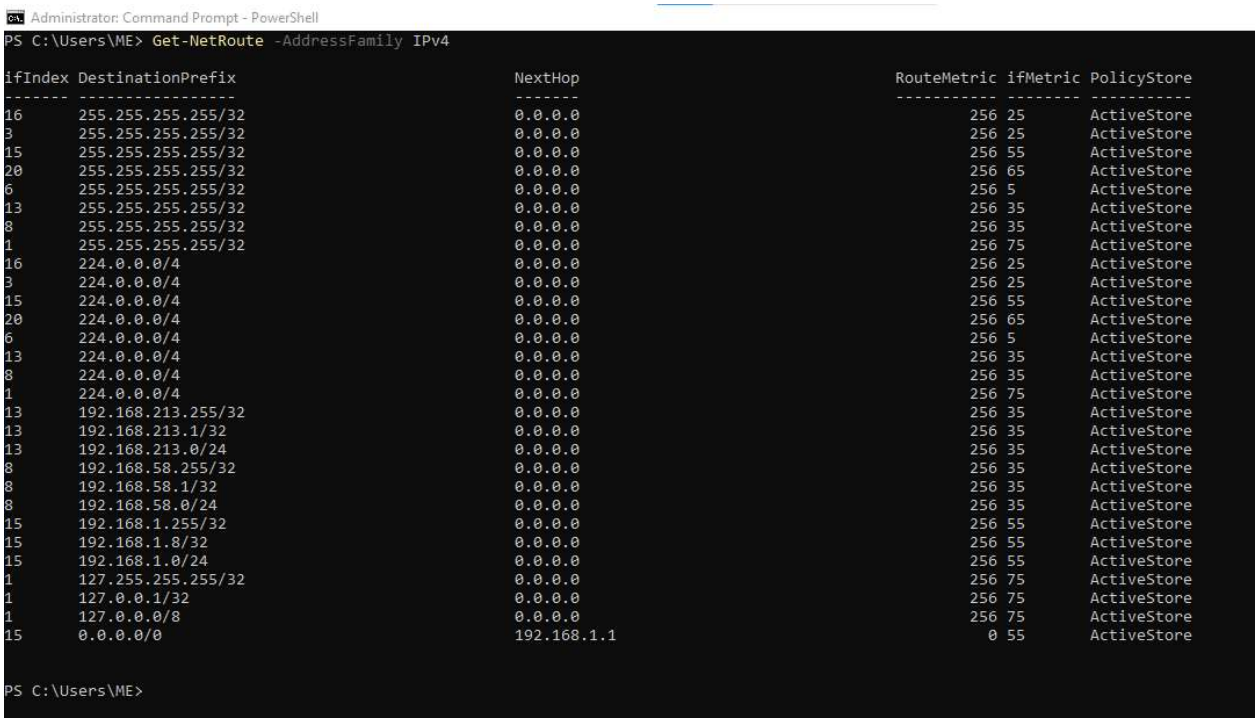


20.Run a command that will display all IPv4 routes that are defined on the local computer.

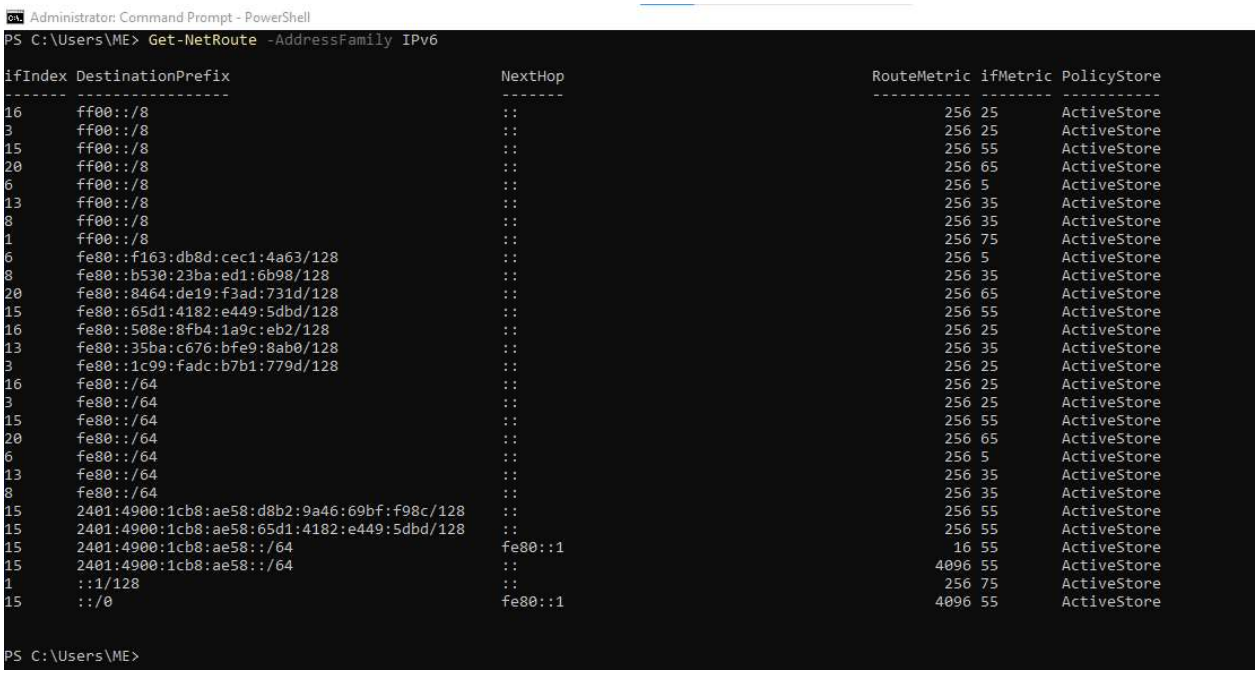
Step-1:- Get all route



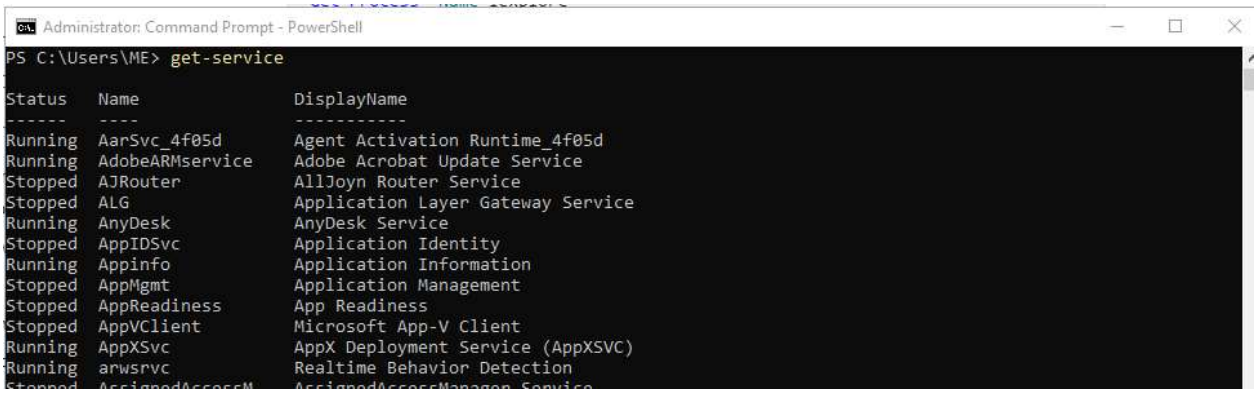
Step-2:- IPv4 Route



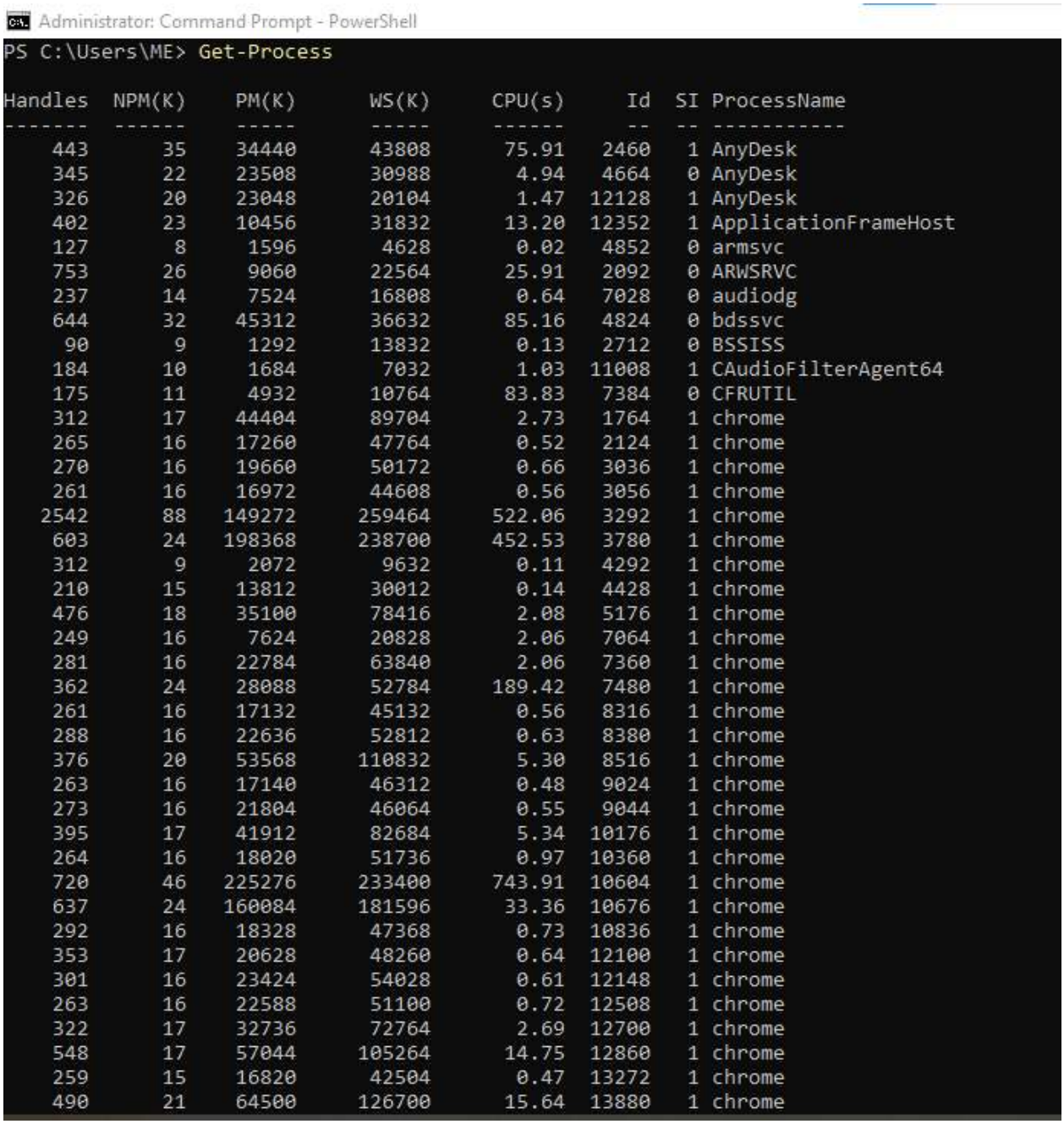
Step-3:- IPv6 Route



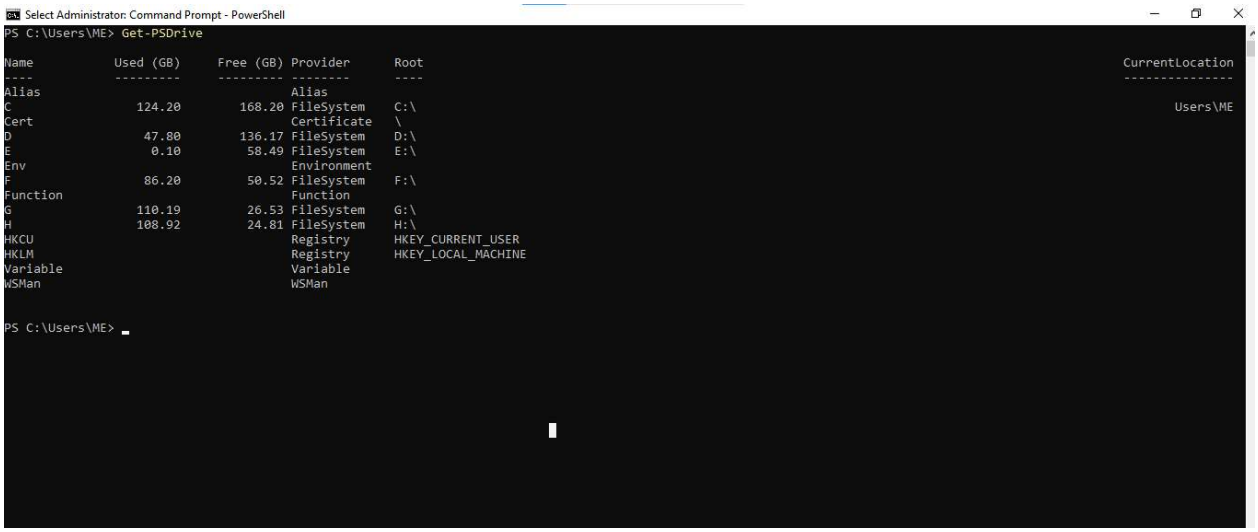
21.Run a command that displays all services. Then, run a second set of commands that will put the exact same information, in the same format, into a text file



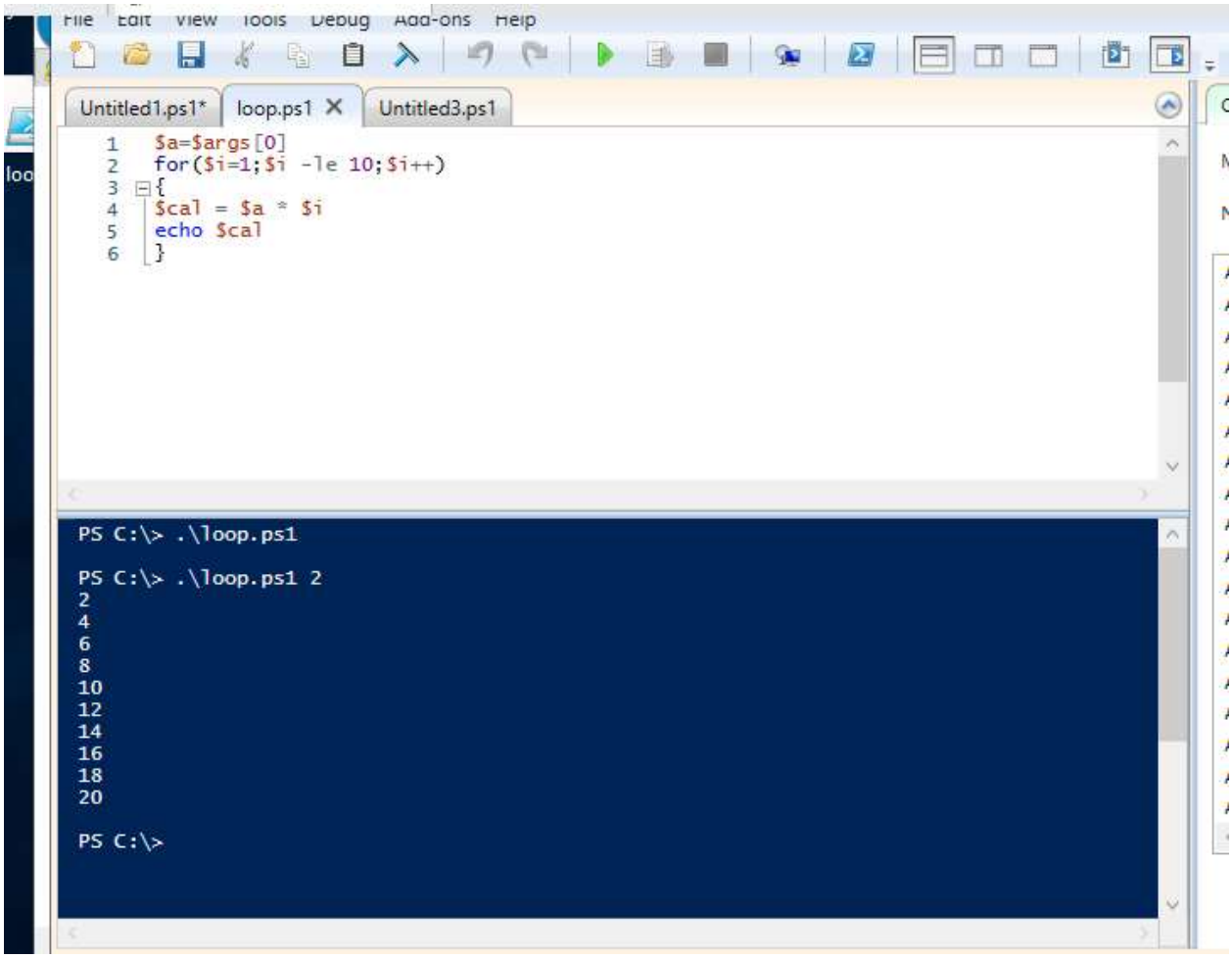
22.Display the total amount of VM, PM, and CPU for all currently running processes. Also include a count of the number of processes.



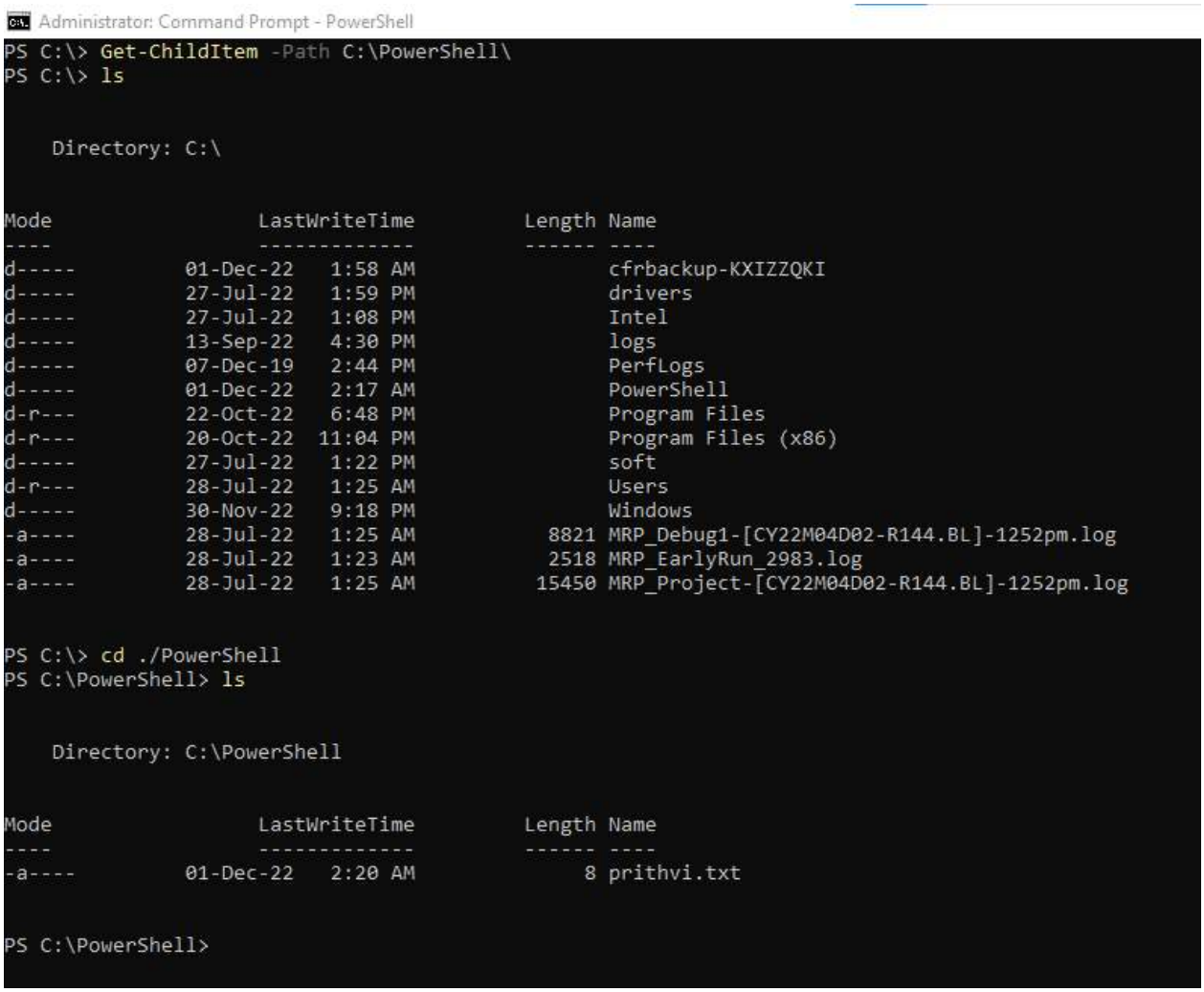
23.Write a power shell script to print name of all storage devices attached to your system.



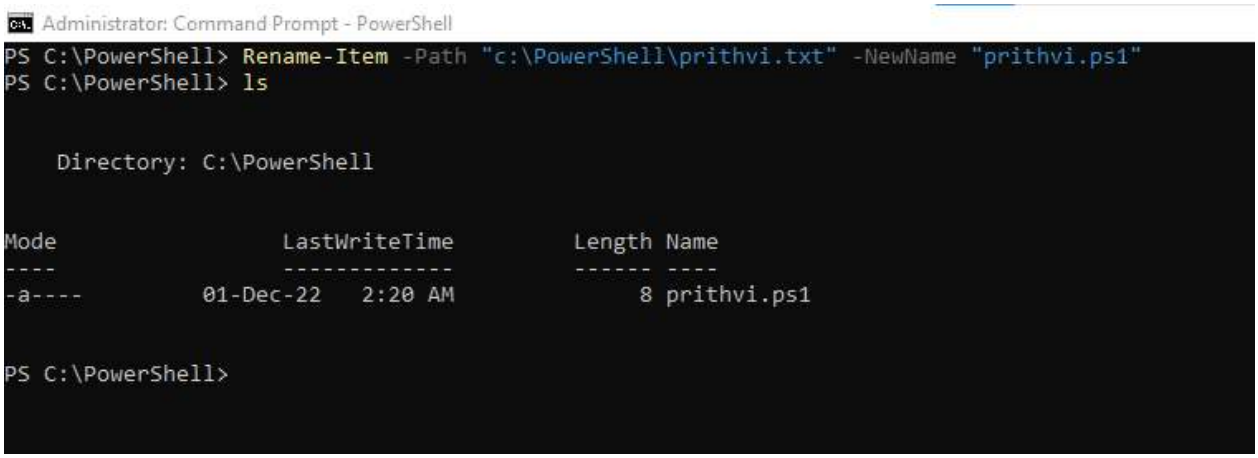
24.Loop through a collection of the numbers(till 10), echo each number unless the number is 2



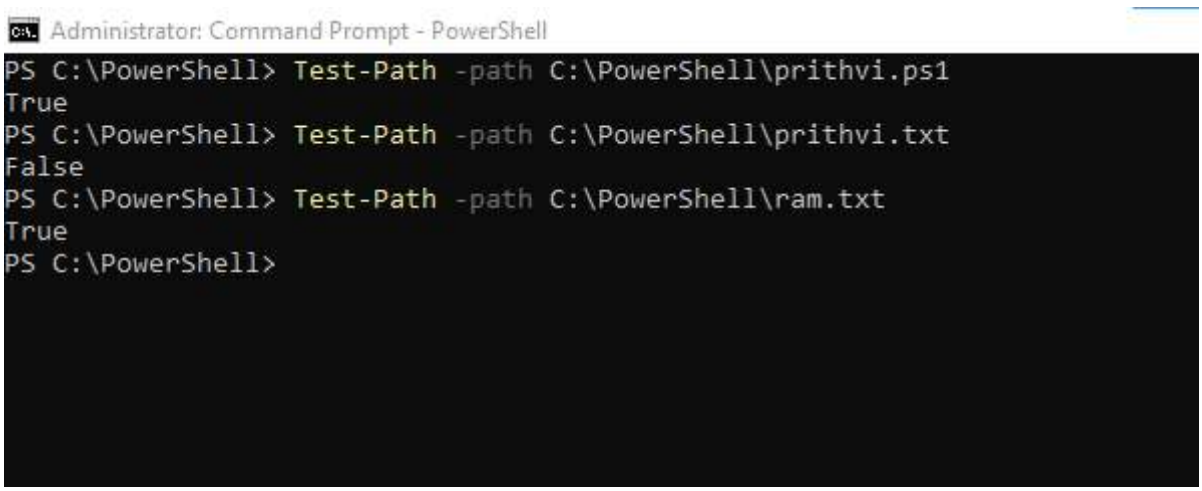
25.Write a power shell script to list the all the .text file in current directory.



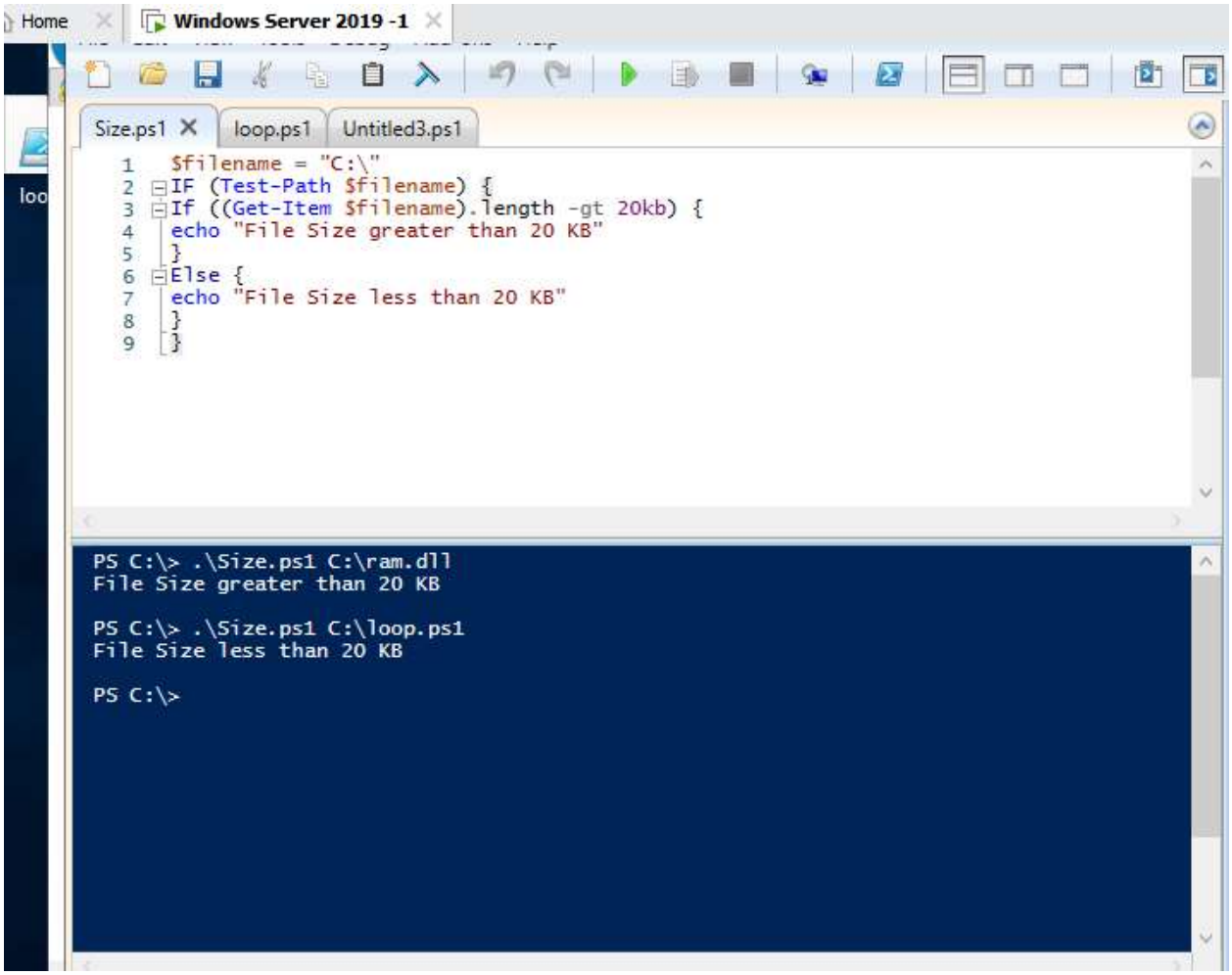
26.Write a power shell script to rename all .text files to .ps1 files.



27.Write a power shell script to check a file exists or not in your current working directory.



28.Write a power shell program to displays those files that are greater than 20K in size in given directory.


Home
Windows Server 2019 -1
Size.ps1
loop.ps1
Untitled3.ps1
$filename = "C:\"
IF (Test-Path $filename) {
If ((Get-Item $filename).length -gt 20kb) {
echo "File Size greater than 20 KB"
}
Else {
echo "File Size less than 20 KB"
}
}
PS C:\> .\Size.ps1 C:\ram.dll
File Size greater than 20 KB
PS C:\> .\Size.ps1 C:\loop.ps1
File Size less than 20 KB
PS C:\>