

4. Gyakorlat

1. Feladat:

```
PS C:\Users\tremb> $PSVersionTable

Name                           Value
----                           -
PSVersion                      5.1.18362.1171
PSEdition                      Desktop
PSCompatibleVersions           {1.0, 2.0, 3.0, 4.0...}
BuildVersion                   10.0.18362.1171
CLRVersion                     4.0.30319.42000
WSManStackVersion              3.0
PSRemotingProtocolVersion      2.3
SerializationVersion           1.1.0.1
```

A PowerShell verzióját kérdezhetjük le a \$PSVersionTable CMDlettel.

2. Feladat:

```
Windows PowerShell (x86)

PS C:\Users\tremb> Get-Service | Get-Member

TypeName: System.ServiceProcess.ServiceController

Name                           MemberType      Definition
----                           -
Name                           AliasProperty   Name = ServiceName
RequiredServices               AliasProperty   RequiredServices = ServicesDependedOn
Disposed                       Event           System.EventHandler Disposed(System.Object, System.EventArgs)
Close                           Method          void Close()
Continue                       Method          void Continue()
CreateObjRef                   Method          System.Runtime.Remoting.ObjRef CreateObjRef(type requestedType)
Dispose                       Method          void Dispose(), void IDisposable.Dispose()
Equals                         Method          bool Equals(System.Object obj)
ExecuteCommand                 Method          void ExecuteCommand(int command)
GetHashCode                   Method          int GetHashCode()
GetLifetimeService             Method          System.Object GetLifetimeService()
GetType                       Method          type GetType()
InitializeLifetimeService      Method          System.Object InitializeLifetimeService()
Pause                         Method          void Pause()
Refresh                       Method          void Refresh()
Start                         Method          void Start(), void Start(string[] args)
Stop                           Method          void Stop()
WaitForStatus                  Method          void WaitForStatus(System.ServiceProcess.ServiceControllerStatus desiredStat...
CanPauseAndContinue            Property        bool CanPauseAndContinue {get;}
CanShutdown                    Property        bool CanShutdown {get;}
CanStop                        Property        bool CanStop {get;}
Container                     Property        System.ComponentModel.IContainer Container {get;}
DependentServices              Property        System.ServiceProcess.ServiceController[] DependentServices {get;}
DisplayName                    Property        string DisplayName {get;set;}
MachineName                    Property        string MachineName {get;set;}
ServiceHandle                  Property        System.Runtime.InteropServices.SafeHandle ServiceHandle {get;}
ServiceName                    Property        string ServiceName {get;set;}
ServicesDependedOn             Property        System.ServiceProcess.ServiceController[] ServicesDependedOn {get;}
ServiceType                    Property        System.ServiceProcess.ServiceType ServiceType {get;}
Site                           Property        System.ComponentModel.ISite Site {get;set;}
StartType                     Property        System.ServiceProcess.ServiceStartMode StartType {get;}
Status                         Property        System.ServiceProcess.ServiceControllerStatus Status {get;}
ToString                       ScriptMethod    System.Object ToString();

PS C:\Users\tremb>
```

Get-Service | Get-Member CMDlettel megtudhatjuk, hogy milyen tagokat ismer a Pshell.

3. Feladat:

```
Windows PowerShell (x86)

PS C:\Users\tremb> Get-Service

Status Name DisplayName
-----
Stopped AarSvc_d7939c Agent Activation Runtime_d7939c
Stopped A3Router Alljoyn-Ütválasztó szolgáltatás
Stopped AIG Alkalmazási réteg átjárószolgáltatás
Stopped AppIDSvc Alkalmazásidentifikáció
Running AppInfo Alkalmazásinformációk
Stopped AppHealth Alkalmazás-elférhetőség
Stopped AppXSvc AppX Deployment Service (AppXSVC)
Running AudioEndpointBu... Windows-hangvegyőzpont-építő
Running AudioSrv Windows audio
Stopped autotimesvc Mobilhálózati idő
Stopped AutotSV Actívus Telenor (AutotSV)
Stopped BcastDVRUserSer... Játékvideó-regisztráció és közvetítés fe...
Stopped BDESVC BitLocker meghajtótitkosítási szolg...
Running BITS Alap szűrőprogram
Running BITS Hátterben futó intelligens átvitel...
Stopped BluetoothUserSe... Felhasználói Bluetooth-támogatási s...
Running BrokerInfrastru... Hírdőnzolgáltatás infrastruktúra-szolg...
Stopped BTAdService Bluetooth-hangátjáró szolgáltatás
Running BthAvctpSvc AVCTP-szolgáltatás
Stopped bthserv Bluetooth-támogatási szolgáltatás
Running CANService CAN Service
Running camsvc Képforgató szolgáltatás-kezelési szolg...
Stopped CaptureService... CaptureService_d7939c
Running chdvsvc_d7939c Végőlap felhasználói szolgáltatás d...
Running CDPSvc Csatlakoztatott eszközök platformja...
Running CDPUserSvc_d7939c Csatlakoztatott eszközök platformja...
Stopped CertPropSvc Tansítvány-terjesztés
Running ClientSvc Microsoft Office Kattintásra szolgál...
Running client_service VMware Horizon Client
Stopped ClipSvc Ugyfél-licenccelési szolgáltatás (Cl...
Stopped COMSysApp COM+ System Application
Stopped ConsentUserSvc... ConsentUX_d7939c
Running CoreMessaging CoreMessaging
Stopped CredentialInrol... CredentialInrollmentManagerUserSvc...
Running CryptSvc Kriptográfiai szolgáltatások
Running DCOMLaunch DCOM-kiszolgáló folyamatindítója
Stopped defragsvc Meghajtók optimalizálása
Stopped DeviceAssociati... DeviceAssociationBroker_d7939c
Running DeviceAssociati... Eszközkezelési szolgáltatás
Stopped DeviceInstall Eszköztelepítő szolgáltatás
Stopped DevicePickerUse... DevicePicker_d7939c
Stopped DeviceFlowdvr... DeviceFlow_d7939c
Running DevQueryBroker DevQuery - észlelési háttérfeladat ...
Running DHCP DHCP-ügyfél
Stopped diagnosticshub... Microsoft (®) Diagnosztikai központ...
Stopped diagsvc Diagnostic Execution Service
Running DiagTrack Összekapcsolt felhasználói elemek...
Running Disc Soft Lite ... Disc Soft Lite Bus Service
Running DispBrokerDext... Kijelzők háttérkép-szolgáltatása
Stopped DisplayEnhance... Megjelentetésjelzési szolgáltatás
Stopped DmEnrollmentSvc Eszközkezelési tansítványigénylési ...
Stopped DmAppPushService Eszközkezelési vezérlő nélküli aka...
Running DnsCache DNS-ügyfél
Stopped DoSvc Képforgató optimalizálása
Stopped dot3svc Vezetékes hálózati automatikus beáll...
Running DPS Diagnosztikavezérlő szolgáltatás
Stopped DsmSvc Eszközkezelési-kezelő
Running DsSvc Adatmegosztási szolgáltatás
Running DuseSvc Adatforgalom
Stopped EapHost Bővíthető hitelesítési protokoll (EAP)
Stopped edgeupdate Microsoft Edge-frissítés szolgáltat...
Stopped edgeupdate Microsoft Edge-frissítés szolgáltat...
Stopped EFS Titkosított fájlrendszer (EFS)
Running Embeddedmode Bekapcsolt mód
Stopped EntAppSvc Nagyvállalati alkalmazásfelügyelet ...
Running Eventlog Windows Eseménynapló
Running EventSystem COM+ eseményrendszer
Stopped Fax Fax
Stopped FdHost Funkciófelderítő szolgáltatás
Stopped FDResPub Funkciófelderítő erőforrás közzététele
Running fsvc Fájlkezelési szolgáltatás
Running FontCache Windows betűtípus-gyorsítótár szolg...
Stopped FontCache3.0.0.0 Windows megjelenítési alrendszer ...
Stopped FranceServer Windows Képekezelési-kiszolgáló
Running Ftns32vhw VMware Workstation Supervisor Service
```

Szolgáltatások a PShellben.

4. Feladat:

```
Windows PowerShell (x86)

Directory: C:\Users\tremb

Mode                LastWriteTime         Length Name
----                -
d----- 2021. 03. 03.      15:27         .config
d----- 2021. 02. 10.      14:11         .eclipse
d----- 2021. 03. 03.      14:02         .p2
d----- 2021. 01. 07.      16:07         .thumbnails
d----- 2021. 02. 10.      14:11         .tooling
d----- 2021. 03. 04.       8:07         .VirtualBox
d-r----- 2021. 02. 20.       9:03         3D Objects
d----- 2021. 01. 04.      22:21         ansel
d----- 2021. 01. 20.      20:02         Cisco Packet Tracer 7.3.1
d-r----- 2021. 02. 20.       9:03         Contacts
d----- 2021. 02. 01.      14:33         Desktop
d----- 2021. 01. 04.      21:47         Documents
d-r----- 2021. 03. 04.       8:09         Downloads
d----- 2021. 02. 10.      14:09         eclipse
d----- 2021. 03. 03.      14:10         eclipse-workspace
d-r----- 2021. 02. 20.       9:03         Favorites
d-r----- 2021. 02. 20.       9:03         Links
d-r----- 2021. 02. 20.       9:03         Music
dar--l 2021. 03. 03.      18:55         OneDrive
d-r----- 2021. 02. 20.       9:03         Saved Games
d-r----- 2021. 02. 20.       9:03         Searches
d-r----- 2021. 03. 04.       7:38         Videos
d----- 2021. 02. 18.       9:38         VirtualBox VMs
-a----- 2021. 03. 03.      16:01      1252 .bash_history
-a----- 2021. 02. 18.      16:37        56 .gitconfig
-a----- 2021. 02. 01.      13:06      176 .packettracer
-a----- 2021. 01. 04.      22:20  127450288 GeForce_Experience_v3.20.5.70.exe
-a----- 2021. 02. 25.       9:20         0 logonsessions

PS C:\Users\tremb>
```

C:\ meghajtómon lévő könyvtárak

5. Feladat:

```
Windows PowerShell (x64)
PS C:\Users\trembo> Get-Alias

CommandType      Name
-----
Alias             * -> ForEach-Object
Alias             ? -> Where-Object
Alias             ac -> Add-Content
Alias             asnp -> Add-PSnapin
Alias             cat -> Get-Content
Alias             cd -> Set-Location
Alias             cfs -> ConvertFrom-String
Alias             chdir -> Set-Location
Alias             cld -> Clear-Content
Alias             clear -> Clear-Host
Alias             clhy -> Clear-History
Alias             cli -> Clear-Item
Alias             clip -> Clear-ItemProperty
Alias             cls -> Clear-Host
Alias             clv -> Clear-Variable
Alias             cnsn -> Connect-PSession
Alias             compare -> Compare-Object
Alias             copy -> Copy-Item
Alias             cp -> Copy-Item
Alias             cpi -> Copy-Item
Alias             cpp -> Copy-ItemProperty
Alias             curl -> Invoke-WebRequest
Alias             cwp -> Convert-Path
Alias             dmp -> Disable-PSBreakpoint
Alias             del -> Remove-Item
Alias             diff -> Compare-Object
Alias             dir -> Get-ChildItem
Alias             dnan -> Disconnect-PSession
Alias             ebp -> Enable-PSBreakpoint
Alias             echo -> Write-Output
Alias             epal -> Export-Alias
Alias             epsv -> Export-Csv
Alias             epsn -> Export-PSession
Alias             erase -> Remove-Item
Alias             etan -> Enter-PSession
Alias             exsn -> Exit-PSession
Alias             fc -> Format-Custom
Alias             fhx -> Format-Hex
Alias             fl -> Format-List
Alias             foreach -> ForEach-Object
Alias             ft -> Format-Table
Alias             fw -> Format-Wide
Alias             gal -> Get-Alias
Alias             gbp -> Get-PSBreakpoint
Alias             gc -> Get-Content
Alias             gcb -> Get-Clipboard
Alias             gcl -> Get-ChildItem
Alias             gcc -> Get-Command
Alias             gcs -> Get-PSCallStack
Alias             gdr -> Get-PSDrive
Alias             ghv -> Get-History
Alias             gi -> Get-Item
Alias             gin -> Get-ComputerInfo
Alias             glb -> Get-Job
Alias             gl -> Get-Location
Alias             gm -> Get-Member
Alias             gmo -> Get-Module
Alias             gp -> Get-ItemProperty
Alias             gnp -> Get-Process
Alias             gpv -> Get-ItemPropertyValue
Alias             group -> Group-Object
Alias             gsn -> Get-PSSession
Alias             gsm -> Get-PSnapin
Alias             gsv -> Get-Service
Alias             gt -> Get-Timeline
Alias             gu -> Get-Unique
Alias             gv -> Get-Variable
Alias             gwmi -> Get-WmiObject
Alias             h -> Get-History
Alias             history -> Get-History
Alias             icm -> Invoke-Command
Alias             iex -> Invoke-Expression
Alias             jhy -> Invoke-History
Alias             ii -> Invoke-Item
Alias             ipal -> Import-Alias
Alias             ipcsv -> Import-Csv

Alias             * -> ForEach-Object
Alias             ? -> Where-Object
Alias             ac -> Add-Content
Alias             asnp -> Add-PSnapin
Alias             cat -> Get-Content
Alias             cd -> Set-Location
Alias             cfs -> ConvertFrom-String
Alias             chdir -> Set-Location
Alias             cld -> Clear-Content
Alias             clear -> Clear-Host
Alias             clhy -> Clear-History
Alias             cli -> Clear-Item
Alias             clip -> Clear-ItemProperty
Alias             cls -> Clear-Host
Alias             clv -> Clear-Variable
Alias             cnsn -> Connect-PSession
Alias             compare -> Compare-Object
Alias             copy -> Copy-Item
Alias             cp -> Copy-Item
Alias             cpi -> Copy-Item
Alias             cpp -> Copy-ItemProperty
Alias             curl -> Invoke-WebRequest
Alias             cwp -> Convert-Path
Alias             dmp -> Disable-PSBreakpoint
Alias             del -> Remove-Item
Alias             diff -> Compare-Object
Alias             dir -> Get-ChildItem
Alias             dnan -> Disconnect-PSession
Alias             ebp -> Enable-PSBreakpoint
Alias             echo -> Write-Output
Alias             epal -> Export-Alias
Alias             epsv -> Export-Csv
Alias             epsn -> Export-PSession
Alias             erase -> Remove-Item
Alias             etan -> Enter-PSession
Alias             exsn -> Exit-PSession
Alias             fc -> Format-Custom
Alias             fhx -> Format-Hex
Alias             fl -> Format-List
Alias             foreach -> ForEach-Object
Alias             ft -> Format-Table
Alias             fw -> Format-Wide
Alias             gal -> Get-Alias
Alias             gbp -> Get-PSBreakpoint
Alias             gc -> Get-Content
Alias             gcb -> Get-Clipboard
Alias             gcl -> Get-ChildItem
Alias             gcc -> Get-Command
Alias             gcs -> Get-PSCallStack
Alias             gdr -> Get-PSDrive
Alias             ghv -> Get-History
Alias             gi -> Get-Item
Alias             gin -> Get-ComputerInfo
Alias             glb -> Get-Job
Alias             gl -> Get-Location
Alias             gm -> Get-Member
Alias             gmo -> Get-Module
Alias             gp -> Get-ItemProperty
Alias             gnp -> Get-Process
Alias             gpv -> Get-ItemPropertyValue
Alias             group -> Group-Object
Alias             gsn -> Get-PSSession
Alias             gsm -> Get-PSnapin
Alias             gsv -> Get-Service
Alias             gt -> Get-Timeline
Alias             gu -> Get-Unique
Alias             gv -> Get-Variable
Alias             gwmi -> Get-WmiObject
Alias             h -> Get-History
Alias             history -> Get-History
Alias             icm -> Invoke-Command
Alias             iex -> Invoke-Expression
Alias             jhy -> Invoke-History
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Alias             * -> ForEach-Object
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Alias             cld -> Clear-Content
Alias             clear -> Clear-Host
Alias             clhy -> Clear-History
Alias             cli -> Clear-Item
Alias             clip -> Clear-ItemProperty
Alias             cls -> Clear-Host
Alias             clv -> Clear-Variable
Alias             cnsn -> Connect-PSession
Alias             compare -> Compare-Object
Alias             copy -> Copy-Item
Alias             cp -> Copy-Item
Alias             cpi -> Copy-Item
Alias             cpp -> Copy-ItemProperty
Alias             curl -> Invoke-WebRequest
Alias             cwp -> Convert-Path
Alias             dmp -> Disable-PSBreakpoint
Alias             del -> Remove-Item
Alias             diff -> Compare-Object
Alias             dir -> Get-ChildItem
Alias             dnan -> Disconnect-PSession
Alias             ebp -> Enable-PSBreakpoint
Alias             echo -> Write-Output
Alias             epal -> Export-Alias
Alias             epsv -> Export-Csv
Alias             epsn -> Export-PSession
Alias             erase -> Remove-Item
Alias             etan -> Enter-PSession
Alias             exsn -> Exit-PSession
Alias             fc -> Format-Custom
Alias             fhx -> Format-Hex
Alias             fl -> Format-List
Alias             foreach -> ForEach-Object
Alias             ft -> Format-Table
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Alias             gal -> Get-Alias
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Alias             gc -> Get-Content
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Alias             gcl -> Get-ChildItem
Alias             gcc -> Get-Command
Alias             gcs -> Get-PSCallStack
Alias             gdr -> Get-PSDrive
Alias             ghv -> Get-History
Alias             gi -> Get-Item
Alias             gin -> Get-ComputerInfo
Alias             glb -> Get-Job
Alias             gl -> Get-Location
Alias             gm -> Get-Member
Alias             gmo -> Get-Module
Alias             gp -> Get-ItemProperty
Alias             gnp -> Get-Process
Alias             gpv -> Get-ItemPropertyValue
Alias             group -> Group-Object
Alias             gsn -> Get-PSSession
Alias             gsm -> Get-PSnapin
Alias             gsv -> Get-Service
Alias             gt -> Get-Timeline
Alias             gu -> Get-Unique
Alias             gv -> Get-Variable
Alias             gwmi -> Get-WmiObject
Alias             h -> Get-History
Alias             history -> Get-History
Alias             icm -> Invoke-Command
Alias             iex -> Invoke-Expression
Alias             jhy -> Invoke-History
Alias             ii -> Invoke-Item
Alias             ipal -> Import-Alias
Alias             ipcsv -> Import-Csv
```

Aliasok.

6. Feladat:

```
Windows PowerShell (x64)
PS C:\Users\trembo> n

Id Commandline
-----
1 Get-Service
2 ncmd
3 Get-Service | Get-Member
4 PSVersionTable
5 $PSVersionTable
6 Get-Service
7 Get-Childitem
8 Get-Alias
9 write "hello word"

PS C:\Users\trembo> New-Alias "processz" Get-Process
PS C:\Users\trembo> processz

Handles NPM(K) PM(K) WS(K) CPU(s) Id SI ProcessName
-----
391 22 22356 35136 0,28 7640 2 ApplicationFrameHost
258 15 10728 18580 75,09 7780 0 audiodg
579 30 62800 776 0,48 12594 2 Calculator
180 11 2320 9252 0,05 10972 2 cam_helper
582 24 17540 38080 135,52 12020 2 cam_helper
175 10 2356 9780 0,13 19040 2 cam_helper
202 11 2096 8536 0,02 20032 2 cam_helper
226 9 2844 7220 0,09 1228 2 chrome
268 18 17940 47960 0,84 4940 2 chrome
288 17 7324 19380 1,67 6004 2 chrome
211 15 17680 34016 0,55 7512 2 chrome
345 23 14540 33892 9,69 7888 2 chrome
212 15 15760 37492 1,19 9388 2 chrome
236 15 14156 37012 0,13 9464 2 chrome
230 14 7576 17176 0,08 11964 2 chrome
315 19 68732 127192 21,09 12252 2 chrome
1799 58 87480 162944 29,03 13124 2 chrome
345 19 31516 66652 1,19 13232 2 chrome
580 25 13276 180204 11,47 12276 2 chrome
215 14 11592 22124 0,05 15584 2 chrome
239 15 13920 37464 0,14 16864 2 chrome
686 40 309804 143216 72,02 17460 2 chrome
233 15 14324 36532 0,11 18800 2 chrome
236 15 13980 36756 0,11 18828 2 chrome
359 11 29724 59644 1,45 20368 2 chrome
161 7 1696 8700 0,02 14904 2 CompPkgSrv
122 8 6492 1076 0,08 13700 2 conhost
261 13 7660 18300 2,52 10092 2 conhost
144 10 6848 12916 0,09 17784 2 conhost
452 15 3956 13352 2,64 12364 2 ctfmon
494 22 1940 6008 868 0 csrss
680 29 3852 5784 11292 2 csrss
320 20 12316 18100 0,09 8652 2 Discord
825 103 168292 161576 34,42 11780 2 Discord
320 54 51240 97800 1,03 12312 2 Discord
241 15 11512 12536 0,03 12524 2 Discord
461 24 15240 24136 0,67 15960 2 Discard
740 45 33356 64208 1,36 20340 2 Discard
304 16 3868 15024 16280 0 DiscSoftBusServiceLite
118 7 1540 6880 0,03 7972 2 dlhost
125 16 3172 18644 0,682 0 dlhost
258 25 6048 14556 0,16 9920 2 dlhost
274 18 7368 17556 0,33 15492 2 DllShim
1152 52 148152 92528 2220 2 dm
3046 192 126340 161372 29,75 9776 2 explorer
32 5 1840 2856 1136 0 fontdrvhost
32 8 4136 10120 6380 2 fontdrvhost
206 10 3268 7156 3756 0 ftnlsv
275 14 4216 11700 3612 0 ftsmngsrv
467 26 64416 1476 0,34 20852 2 GameBar
290 12 2880 14084 0,14 16280 2 GameBarFIServer
182 11 1720 1124 11172 0 GoogleCrashHandler
161 9 1724 1068 11204 0 GoogleCrashHandler64
270 18 5964 14212 1,50 15708 2 helper
259 16 2404 12536 3780 0 horizon_client_service
0 0 60 8 0 Idle
540 0 61036 54080 0,70 16040 2 LockApp
1081 30 9436 23756 424 2 Lsass
0 0 176 4580 2388 0 Memory Compression
863 51 90204 1136 6032 2 Microsoft.Photos
2741 90 796568 694496 0,66 3856 0 MsMpEng
```

Jelenleg futó processzek.

```
PS C:\Users\tremb> gal processz
```

CommandType	Name	Version	Source
Alias	processz -> Get-Process		

7. Feladat:

```
Windows PowerShell (x86)

PS C:\Users\tremb> gsv | fl name, status

Name       : AarSvc_d7939c
Status     : Stopped
Name       : A3Router
Status     : Stopped
Name       : ALG
Status     : Stopped
Name       : AppIDSvc
Status     : Stopped
Name       : AppInfo
Status     : Running
Name       : AppReadiness
Status     : Stopped
Name       : AppSvc
Status     : Stopped
Name       : AudioEndpointBuilder
Status     : Running
Name       : Audiosrv
Status     : Running
Name       : autotimesvc
Status     : Stopped
Name       : AxInstSV
Status     : Stopped
Name       : BcastDVRUserService_d7939c
Status     : Stopped
Name       : BDESVC
Status     : Stopped
Name       : BFE
Status     : Running
Name       : BITS
Status     : Running
Name       : BluetoothUserService_d7939c
Status     : Stopped
Name       : BrokerInfrastructure
Status     : Running
Name       : BTAGService
Status     : Stopped
Name       : BthAvctpSvc
Status     : Running
Name       : bthserv
Status     : Stopped
Name       : CAMService
Status     : Running
Name       : camsvc
Status     : Running
Name       : CaptureService_d7939c
Status     : Stopped
Name       : cbdhsvc_d7939c
Status     : Running
Name       : CDPSvc
Status     : Running
Name       : CDPUserSvc_d7939c
```

b)

```
Windows PowerShell (x86)

+ FullyQualifiedErrorId : NameParameterNotFound,Microsoft.PowerShell.Commands.FormatListCommand

PS C:\Users\tremb> Get-Service | fl name, status

Name       Status
-----
AarSvc_d7939c Stopped
A3Router    Stopped
ALG         Stopped
AppIDSvc    Running
AppInfo     Stopped
AppSvc      Stopped
AudioEndpointBuilder Running
Audiosrv    Running
autotimesvc Stopped
AxInstSV    Stopped
BcastDVRUserService_d7939c Stopped
BDESVC      Stopped
BFE         Running
BITS        Running
BluetoothUserService_d7939c Stopped
BrokerInfrastructure Running
BTAGService Stopped
BthAvctpSvc Running
bthserv     Stopped
CAMService  Running
camsvc      Running
CaptureService_d7939c Stopped
cbdhsvc_d7939c Running
CDPSvc      Running
CDPUserSvc_d7939c Running
CertPropSvc Stopped
ClientToCloudSvc Running
client_service Running
clbcatqsvc  Running
COMSysApp  Stopped
ComentUserSvc_d7939c Stopped
CoreMessagingRegistrar Running
CredentialInrollmentManagerUserSvc_d7939c Stopped
CryptSvc    Running
DcomLaunch Running
Defender    Stopped
DeviceAssociationBrokerSvc_d7939c Stopped
DeviceAssociationService Running
DeviceInstall Stopped
DevicePickerUserSvc_d7939c Stopped
DeviceTelemetrySvc_d7939c Stopped
DevQueryBroker Running
Dhcp        Running
DiagnosticHub.standardcollector.service Stopped
diagsvc     Stopped
diagtrack   Running
Dism        Running
DismSoftLteBusService Running
DisplayContainerManagementService Stopped
DmEnrollmentSvc Stopped
DmPushSvc   Stopped
DmCache     Running
Dmcc        Stopped
dot3svc     Stopped
DPS         Running
DPM         Stopped
DfsSvc      Stopped
DismSvc     Running
DismHost    Stopped
EdgeUpdate Stopped
EdgeUpdateSvc Stopped
EFS         Stopped
EhSt         Stopped
EventAggSvc Running
EventSystem Running
Fax         Stopped
FaxHost     Stopped
FDResPub    Stopped
Ffrmc       Stopped
FontCache   Running
FontCache3.0.0.0 Stopped
FrameServer Stopped
ftlsv32sv  Running
```

c)

```

Windows PowerShell (x64)
PS C:\Users\tremb> Get-Service | ft name, status -AutoSize

Name                                     Status
----
AASvc_d7939c                           Stopped
AARouter                               Stopped
ALG                                     Stopped
AppInfo                                 Running
AppReadiness                           Stopped
AppSvc                                  Stopped
AudioEndpointBuilder                   Running
AudioSvc                                Running
Autotimersvc                           Stopped
AvInstSV                                Stopped
BasicDVUserService_d7939c              Stopped
BOSvc                                   Stopped
BFE                                     Running
BITS                                    Running
BluetoothUserService_d7939c            Stopped
BrokerInfrastructure                   Running
STATService                            Stopped
BthAvctpSvc                            Running
ctxserv                                 Stopped
camService                              Running
camsvc                                  Stopped
CaptureService_d7939c                  Stopped
cdbsvc_d7939c                           Running
CDPSvc                                  Running
CDPUserService_d7939c                   Stopped
CertPropSvc                            Stopped
ClickToRunSvc                          Running
client_service                         Running
ClipSvc                                Stopped
COMSysApp                              Stopped
ConsentUIUserService_d7939c            Stopped
CoreMessagingRegistrar                 Running
CredentialInrollmentManagerUserService_d7939c Running
CryptSvc                               Running
DcomLaunch                             Running
DefragSvc                              Stopped
DeviceAssociationBrokerSvc_d7939c       Stopped
DeviceAssociationService                Running
DeviceInstall                          Stopped
DevicePickerUserService_d7939c          Stopped
DeviceSetupSvc_d7939c                  Running
DevQueryBroker                         Running
Dhcp                                    Stopped
DiagnosticHub.standardcollector.service Running
diagsvc                                 Stopped
DiagTrack                              Running
Disa_Soft_Lite_Bus_Service              Running
DispBrokerDesktopSvc                   Stopped
DisplayEnhancementService              Stopped
edrrollmentSvc                         Stopped
dmappushservice                        Stopped
DnsCache                               Running
DOSvc                                   Stopped
dot3svc                                Stopped
DPS                                     Running
DsmSvc                                  Stopped
DsmSvc                                  Stopped
DsmSvc                                  Stopped
EapHost                                Stopped
edgeupdate                             Stopped
edgeupdate                             Stopped
EFS                                     Stopped
EmbeddedMode                           Stopped
EntAppSvc                              Running
EventLog                               Running
EventSystem                            Running

```

-AutoSize

8. Feladat:

```

Windows PowerShell (x64)
PS C:\Users\tremb> processz | Sort-Object name

ProcessName      PID(K)      PPID(K)      CPU(K)      Private      Id      SI      ProcessName
-----
ApplicationFrameHost 391 22 22356 33432 0,28 7640 2 ApplicationFrameHost
...
Registry 0 14 6652 78824 0 144 0 Registry

```

b)

```
Windows PowerShell (66)
PS C:\Users\tremb> processz | Sort-Object name -Descending
```

Handles	NPM(K)	PM(K)	WS(K)	CPU(s)	Id	SI	ProcessName
642	39	51568	72384	1,61	1680	2	YourPhoneServer
757	49	75936	13196	0,08	21952	2	YourPhone
1633	74	350224	212888	48,22	10832	2	WinWord
1018	74	104488	11128	1,06	11920	2	WinStore.App
275	12	2096	10272		15680	2	winlogon
164	11	1688	7580		968	0	wininit
93	8	1408	5564		3644	0	wallpaperservice32_c
463	38	52244	56868	6,94	15980	2	wallpaper32
246	12	3572	8496		3776	0	vmtoolsdtools
217	13	2828	11080		4184	0	vmtoolsdtools
484	22	68716	104336	2,66	14464	2	VirtualBox
775	16	6372	20640	0,19	1868	2	VBoxSVC
150	10	2136	9648		1676	0	VBoxSVC
938	104	59864	93716	2,45	1692	2	utorrent
288	16	2768	13124	0,08	7428	2	utorrent
644	49	17216	26128	6,09	6432	2	utorrent
411	95	17468	20964		3996	0	TeamViewer_Service
333	27	28436	48324	0,22	6284	2	Teams
1093	66	155760	15396	11,91	10420	2	Teams
1080	53	166440	110512	1,50	852	2	Teams
479	118	232480	249620	17,38	2384	2	Teams
447	21	15796	28044	1,95	11252	2	Teams
315	23	23840	31096	0,09	15120	2	Teams
308	60	74720	100532	2,17	15236	2	Teams
656	35	131320	76580	1,78	12700	2	Teams
332	20	11576	21084	0,28	13300	2	Teams
282	41	9364	10880	0,41	10200	2	tsHostw
5730	0	196	140		4	0	System
262	9	2156	8356		2444	0	svchost
178	12	1520	8520		2360	0	svchost
525	29	10460	21380		2480	0	svchost
164	10	1596	8880		2452	0	svchost
545	12	2840	8992		2112	0	svchost
294	7	1320	5976		2144	0	svchost
226	13	3812	13460		2136	0	svchost
169	9	1992	7876		2168	0	svchost
223	11	2552	13536		2152	0	svchost
520	15	4740	15160		2924	0	svchost
124	12	1752	6616		2880	0	svchost
410	31	10704	19680		3232	0	svchost
244	14	2884	14340		3080	0	svchost
176	9	1960	7780		2784	0	svchost
549	10	2632	9472		2536	0	svchost
280	10	7044	15580		2524	0	svchost
272	11	3084	10724		2764	0	svchost
123	8	1564	7420		2668	0	svchost
329	10	2884	9852		1316	0	svchost
1390	19	9612	17932		1268	0	svchost
151	9	2088	11344		1524	0	svchost
222	12	2344	10592		1516	0	svchost
291	13	3680	9080		1260	0	svchost
430	18	9680	25400	2,19	632	2	svchost
391	18	6288	16072		1120	0	svchost
1186	23	11080	26312		1084	0	svchost
87	5	968	3992		1040	0	svchost
232	10	2332	8880		1892	0	svchost
140	10	1740	8448		1844	0	svchost
382	16	5080	13020		2024	0	svchost
173	7	1652	6288		1900	0	svchost
540	23	9104	37240	2,44	1832	2	svchost
141	12	1636	6284		1660	0	svchost
428	14	15980	18884		1612	0	svchost
148	30	5752	18072		1796	0	svchost
220	12	2396	11408		1780	0	svchost
141	8	1592	7228		11320	2	svchost
250	14	2880	15016	0,13	11168	2	svchost
649	74	23744	37788		14800	0	svchost
218	12	4672	18212		14736	0	svchost
116	7	1284	5616		10188	0	svchost
399	20	5336	19740		7276	0	svchost
177	9	1080	8080		7044	0	svchost
169	8	1088	6928		9692	0	svchost
171	10	2112	9676		7488	0	svchost
303	13	3180	11464		20492	0	svchost
227	11	3924	8668		19852	0	svchost
140	9	1664	7820		21500	0	svchost
231	16	2040	7572		2104	0	svchost

9. Feladat:

```
PS C:\Users\tremb> gsv | Where-Object { $_.name -eq "w32time" }
```

Status	Name	DisplayName
Stopped	W32Time	Windows Time

10. Feladat:

```
PS C:\Users\tremb> gsv | Where-Object { $_.name -like "wi*" }
```

Status	Name	DisplayName
Stopped	WiaRpc	Állókép-beviteli események
Running	WinDefend	Windows Defender víruskereső szolgál...
Running	WinHttpAutoProx...	WinHTTP automatikus webproxy-kereső...
Running	Winmgmt	Windows Management Instrumentation
Stopped	WinRM	Rendszerfelügyeleti webszolgáltatások
Stopped	wisvc	Windows Insider szolgáltatás

```
Windows PowerShell (x86)
CommandType      Name
-----
Alias             proce -> Get-Process

PS C:\Users\tremb> proce | ForEach-Object { $_.id*2 }
15280
15560
11948
21944
24040
10880
40064
2440
9880
12008
15776
15776
18928
13928
24504
26248
15464
30552
31168
54920
56000
90850
40736
25008
17560
32104
35568
35712
1736
22504
17304
23560
44824
25048
39920
40696
32560
15944
18976
19840
30904
4456
19552
2272
12792
7512
7624
40104
32416
12344
22408
31416
7416
0
33800
948
4776
12284
7712
11976
7272
12520
37912
40904
24104
17104
11272
34016
12032
16712
24216
16400
27696
24200
```

Megj.: Átírtam a processz aliaszt proce-re, a gyorsabb gépelés érdekében.

11. Feladat:

```
PS C:\Users\tremb> proce | Measure-Object

Count      : 219
Average    :
Sum        :
Maximum    :
Minimum    :
Property   :
```

12. Feladat:

```
PS C:\Users\tremb> proce | Measure-Object -Property id -Maximum -Minimum -Average -Sum

Count      : 218
Average    : 8880,18348623853
Sum        : 1935880
Maximum    : 22180
Minimum    : 0
Property   : Id
```

13. Feladat:

```
PS C:\Users\tremb> (Get-Service).count
267
PS C:\Users\tremb>
```

b)

```
PS C:\Users\tremb>
PS C:\Users\tremb> $x = (gsv)
PS C:\Users\tremb> $x.count
267
PS C:\Users\tremb>
```

14. Feladat:

```

PS C:\Users\tremb> $x = 5
PS C:\Users\tremb> $x | Get-Member

TypeName: System.Int32

Name      MemberType Definition
-----
CompareTo Method      int CompareTo(System.Object value), int CompareTo(int value), int IComparable.CompareTo(Syste...
Equals    Method      bool Equals(System.Object obj), bool Equals(int obj), bool IEquatable[int].Equals(int other)
GetHashCode Method    int GetHashCode()
GetType   Method      type GetType()
GetTypeCode Method    System.TypeCode GetTypeCode(), System.TypeCode IConvertible.GetTypeCode()
ToBoolean Method    bool IConvertible.ToBoolean(System.IFormatProvider provider)
ToByte    Method    byte IConvertible.ToByte(System.IFormatProvider provider)
ToChar    Method    char IConvertible.ToChar(System.IFormatProvider provider)
ToDateTime Method    datetime IConvertible.ToDateTime(System.IFormatProvider provider)
ToDecimal Method    decimal IConvertible.ToDecimal(System.IFormatProvider provider)
ToDouble  Method    double IConvertible.ToDouble(System.IFormatProvider provider)
ToInt16   Method    int16 IConvertible.ToInt16(System.IFormatProvider provider)
ToInt32   Method    int IConvertible.ToInt32(System.IFormatProvider provider)
ToInt64   Method    long IConvertible.ToInt64(System.IFormatProvider provider)
ToSByte   Method    sbyte IConvertible.ToSByte(System.IFormatProvider provider)
ToSingle  Method    float IConvertible.ToSingle(System.IFormatProvider provider)
ToString  Method    string ToString(), string ToString(string format), string ToString(System.IFormatProvider pro...
ToType    Method    System.Object IConvertible.ToType(type conversionType, System.IFormatProvider provider)
ToUInt16  Method    uint16 IConvertible.ToUInt16(System.IFormatProvider provider)
ToUInt32  Method    uint32 IConvertible.ToUInt32(System.IFormatProvider provider)
ToUInt64  Method    uint64 IConvertible.ToUInt64(System.IFormatProvider provider)

```

Tömbök:

```

PS C:\Users\tremb> $tomb = 1..10
PS C:\Users\tremb> $tomb = proce_
PS C:\Users\tremb> $tomb = 1..10_
PS C:\Users\tremb> $tomb += 52_

```

15. Feladat:

```

PS C:\Users\tremb> $szoveg = "Miskolc"
PS C:\Users\tremb> "$szoveg elek"
Miskolc elek
PS C:\Users\tremb> "$szoveg-on elek"
Miskolc-on elek
PS C:\Users\tremb> '$szoveg-on elek'
$szoveg-on elek
PS C:\Users\tremb>

```

16. Feladat:

```

PS C:\Users\tremb> $szoveg.Length
7
PS C:\Users\tremb> $szoveg.ToUpper()
MISKOLC
PS C:\Users\tremb> $szoveg.Replace("kolc", "ka")
Miska
PS C:\Users\tremb> $szoveg.Split("s")
Mi
kolc
PS C:\Users\tremb>

```

17. Feladat:

gsv Out-GridView		
Filter		
+ Add criteria		
Status	Name	DisplayName
Stopped	AarSvc_d7939c	Agent Activation Runtime_d7939c
Stopped	AJRouter	Alluoy-n-útvalasztó szolgáltatás
Stopped	ALG	Alkalmazási réteg átjárószolgáltatása
Stopped	AppIDSvc	Alkalmazásidentitás
Running	Appinfo	Alkalmazásinformációk
Stopped	AppReadiness	Alkalmazás-előkészítő
Stopped	AppXSvc	AppX Deployment Service (AppXSVC)
Running	AudioEndpointBuilder	Windows-hangvégpontépítő
Running	Audiosrv	Windows audió
Stopped	autotimesvc	Mobilhálózati idő
Stopped	AxInstSV	ActiveX Telepítő (AxInstSV)
Stopped	BcastDVRUserService_d7939c	Játékvideó-rögzítő és Közvetítés felhasználói szolgáltatás_d7939c
Stopped	BDESVC	BitLocker meghajtótitkosítási szolgáltatás
Running	BFE	Alap szűrőprogram
Running	BITS	Háttérben futó intelligens átviteli szolgáltatás
Stopped	BluetoothUserService_d7939c	Felhasználói Bluetooth-támogatási szolgáltatás_d7939c
Running	BrokerInfrastructure	Háttérfeladatok infrastruktúra-szolgáltatása
Stopped	BTAGService	Bluetooth-hangátjáró szolgáltatás
Running	BthAvctpSvc	AVCTP-szolgáltatás
Stopped	bthserv	Bluetooth-támogatási szolgáltatás
Running	CAMService	CAM Service
Running	camsvc	Képesség hozzáférés-kezelési szolgáltatása
Stopped	CaptureService_d7939c	CaptureService_d7939c
Running	cbdhsvc_d7939c	Vágólapp felhasználói szolgáltatás_d7939c
Running	CDPSvc	Csatlakoztatott eszközök platformja (CDP) szolgáltatás
Running	CDPUserService_d7939c	Csatlakoztatott eszközök platformja (CDP) felhasználói szolgáltatás_d7939c
Stopped	CertPropSvc	Tanúsítvány-terjesztés
Running	ClickToRunSvc	Microsoft Office Kattintásra szolgáltatás
Running	client_service	VMware Horizon Client
Running	ClipSVC	Ügyfél-licenclési szolgáltatás (ClipSVC)
Stopped	COMSysApp	COM+ System Application
Stopped	ConsentUxUserService_d7939c	ConsentUX_d7939c
Running	CoreMessagingRegistrar	CoreMessaging
Stopped	CredentialEnrollmentManagerUserService_d7939c	CredentialEnrollmentManagerUserService_d7939c
Running	CryptSvc	Kriptográfiai szolgáltatások

18. Feladat:

```

PS C:\Users\tremb> $n= "D:\B58TC3.txt"
PS C:\Users\tremb> $B58TC3 = Get-Content $n
PS C:\Users\tremb> $B58TC3
PS C:\Users\tremb> $B58TC3 = Get-Content $n
PS C:\Users\tremb> $B58TC3
NK: B58TC3
PS C:\Users\tremb> $B58TC3.Count
1
PS C:\Users\tremb> Get-Item $n

Directory: D:\

Mode                LastWriteTime         Length Name
----                -
-a----         2021. 03. 04.          9:51           10 B58TC3.txt

PS C:\Users\tremb>

```

Megj.: A D:\ meghajtóra hoztam létre a .txt file-t, mivel mindent azon tárolok, a C:\-n csak a Win és a driverek vannak.