1. Kérdezze le a PowerShellVerziót!

2. Kérdezze le tagokat!

3. Kérdezze le a szolgáltatásokat!

```
Windows PowerShell

PS C:\Users\Dzsama> Get-Service

Status    Name                 DisplayName
------    ----                 -----------
Running   AarSvc_6dc5c         AarSvc_6dc5c
Running   AdobeARMservice      Adobe Acrobat Update Service
Stopped   AJRouter             AllJoyn Router Service
Stopped   ALG                  Application Layer Gateway Service
Stopped   AppIDSvc             Application Identity
Running   Appinfo              Application Information
Stopped   AppMgmt              Application Management
Stopped   AppReadiness         App Readiness
Stopped   AppVClient           Microsoft App-V Client
Running   AppXSvc              AppX Deployment Service (AppXSVC)
Stopped   AssignedAccessM...   AssignedAccessManager Service
Running   aswbIDSAgent         aswbIDSAgent
Running   AudioEndpointBu...   Windows Audio Endpoint Builder
Running   Audiosrv             Windows Audio
Stopped   autotimesvc          Cellular Time
Running   avast! Antivirus     Avast Antivirus
Running   avast! Tools         Avast Tools
Running   AvastWscReporter     AvastWscReporter
Stopped   AxInstSV             ActiveX Installer (AxInstSV)
Stopped   BcastDVRUserSer...   BcastDVRUserService_6dc5c
Stopped   BDESVC               BitLocker Drive Encryption Service
Stopped   BEService            BattlEye Service
Running   BFE                  Base Filtering Engine
Stopped   BITS                 Background Intelligent Transfer Ser...
Stopped   BluetoothUserSe...   BluetoothUserService_6dc5c
Running   BrokerInfrastru...   Background Tasks Infrastructure Ser...
Stopped   BTAGService          Bluetooth Audio Gateway Service
Running   BthAvctpSvc          AVCTP service
Stopped   bthserv              Bluetooth Support Service
Running   camsvc               Capability Access Manager Service
Stopped   CaptureService_...   CaptureService_6dc5c
Running   cbdhsvc_6dc5c        cbdhsvc_6dc5c
Running   CDPSvc               Connected Devices Platform Service
Running   CDPUserSvc_6dc5c     CDPUserSvc_6dc5c
Running   CertPropSvc          Certificate Propagation
Stopped   ClipSVC              Client License Service (ClipSVC)
Stopped   COMSysApp            COM+ System Application
Stopped   ConsentUxUserSv...   ConsentUxUserSvc_6dc5c
Running   CoreMessagingRe...   CoreMessaging
Running   CorsairGamingAu...   Corsair Gaming Audio Configuration ...
Running   CorsairLLAService    Corsair LLA Service
Running   CorsairService       Corsair Service
Stopped   CredentialEnrol...   CredentialEnrollmentManagerUserSvc_...
Running   CryptSvc             Cryptographic Services
Stopped   CscService           Offline Files
Running   DcomLaunch           DCOM Server Process Launcher
Stopped   defragsvc            Optimise drives
Stopped   DeviceAssociati...   DeviceAssociationBrokerSvc_6dc5c
Running   DeviceAssociati...   Device Association Service
Running   DeviceInstall        Device Install Service
Stopped   DevicePickerUse...   DevicePickerUserSvc_6dc5c
Stopped   DevicesFlowUser...   DevicesFlowUserSvc_6dc5c
Running   DevQueryBroker       DevQuery Background Discovery Broker
Running   Dhcp                 DHCP Client
Stopped   diagnosticshub....   Microsoft (R) Diagnostics Hub Stand...
Stopped   diagsvc              Diagnostic Execution Service
Running   DiagTrack            Connected User Experiences and Tele...
Stopped   DialogBlockingS...   DialogBlockingService
Stopped   Disc Soft Lite ...   Disc Soft Lite Bus Service
Running   DispBrokerDeskt...   Display Policy Service
Stopped   DisplayEnhancem...   Display Enhancement Service
Stopped   DmEnrollmentSvc      Device Management Enrollment Service
Stopped   dmwappushservice     Device Management Wireless Applicat...
Running   Dnscache             DNS Client
Stopped   DoSvc                Delivery Optimization
Stopped   dot3svc              Wired AutoConfig
Running   DPS                  Diagnostic Policy Service
Stopped   DsmSvc               Device Setup Manager
```

4. Kérdezze le a C:\ meghajtó lévő könyvtárakat ill. fájlokat!

```
Windows PowerShell

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Dzsama> Get-ChildItem


    Directory: C:\Users\Dzsama


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        15/02/2021     17:23                .config
d-----        25/11/2020     14:36                .dotnet
d-----        29/03/2021     13:10                .eclipse
d-----        25/04/2020     21:00                .Origin
d-----        11/05/2021     16:40                .p2
d-----        25/04/2020     21:00                .QtWebEngineProcess
d-----        17/12/2020     23:32                .templateengine
d-----        10/02/2021     03:25                .tooling
d-----        12/05/2021     11:58                .VirtualBox
d-----        18/12/2020     19:32                .vscode
d-----        10/02/2021     03:52                .webclipse
d-r---        16/03/2021     01:01                3D Objects
d-----        25/04/2020     21:30                ansel
d-----        18/09/2020     13:28                Apple
d-r---        16/03/2021     01:01                Contacts
d-r---        12/05/2021     12:17                Desktop
d-r---        10/05/2021     02:29                Documents
d-r---        12/05/2021     11:48                Downloads
d-r---        16/03/2021     01:01                Favorites
d-----        31/03/2021     15:39                git
dar--l        12/05/2021     11:18                iCloudDrive
d-r---        16/03/2021     01:01                Links
d-r---        16/03/2021     01:01                Music
dar--l        12/05/2021     11:18                OneDrive
d-r---        16/03/2021     01:01                Pictures
d-r---        16/03/2021     01:01                Saved Games
d-r---        16/03/2021     01:01                Searches
d-----        04/05/2020     19:08                source
d-r---        08/05/2021     03:20                Videos
d-----        01/12/2020     23:36                VirtualBox VMs
-a----        10/02/2021     03:51            106 .ctsystem
-a----        15/02/2021     16:49            200 .gitconfig
-a----        27/04/2020     20:01           4366 AMDRM_Install.log
-a----        27/04/2020     16:19        2701424 AMD_RyzenMaster.log
```

5. Kérdezze a parancsok rövidített neveit!

```
Windows PowerShell
PS C:\Users\Dzsama> Get-Alias

CommandType     Name                                               Version    Source
-----------     ----                                               -------    ------
Alias           % -> ForEach-Object
Alias           ? -> Where-Object
Alias           ac -> Add-Content
Alias           asnp -> Add-PSSnapin
Alias           cat -> Get-Content
Alias           cd -> Set-Location
Alias           CFS -> ConvertFrom-String                          3.1.0.0    Microsoft.PowerShell.Utility
Alias           chdir -> Set-Location
Alias           clc -> Clear-Content
Alias           clear -> Clear-Host
Alias           clhy -> Clear-History
Alias           cli -> Clear-Item
Alias           clp -> Clear-ItemProperty
Alias           cls -> Clear-Host
Alias           clv -> Clear-Variable
Alias           cnsn -> Connect-PSSession
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           cvpa -> Convert-Path
Alias           dbp -> Disable-PSBreakpoint
Alias           del -> Remove-Item
Alias           diff -> Compare-Object
Alias           dir -> Get-ChildItem
Alias           dnsn -> Disconnect-PSSession
Alias           ebp -> Enable-PSBreakpoint
Alias           echo -> Write-Output
Alias           epal -> Export-Alias
Alias           epcsv -> Export-Csv
Alias           epsn -> Export-PSSession
Alias           erase -> Remove-Item
Alias           etsn -> Enter-PSSession
Alias           exsn -> Exit-PSSession
Alias           fc -> Format-Custom
Alias           fhx -> Format-Hex                                  3.1.0.0    Microsoft.PowerShell.Utility
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                               3.1.0.0    Microsoft.PowerShell.Management
Alias           gci -> Get-ChildItem
Alias           gcm -> Get-Command
Alias           gcs -> Get-PSCallStack
Alias           gdr -> Get-PSDrive
Alias           ghy -> Get-History
Alias           gi -> Get-Item
Alias           gin -> Get-ComputerInfo                            3.1.0.0    Microsoft.PowerShell.Management
Alias           gjb -> Get-Job
Alias           gl -> Get-Location
Alias           gm -> Get-Member
Alias           gmo -> Get-Module
Alias           gp -> Get-ItemProperty
Alias           gps -> Get-Process
Alias           gpv -> Get-ItemPropertyValue
Alias           group -> Group-Object
Alias           gsn -> Get-PSSession
Alias           gsnp -> Get-PSSnapin
Alias           gsv -> Get-Service
Alias           gtz -> Get-TimeZone                                3.1.0.0    Microsoft.PowerShell.Management
Alias           gu -> Get-Unique
Alias           gv -> Get-Variable
Alias           gwmi -> Get-WmiObject
```

6. Készítsen egy „processz" nevű Alias!

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

Handles  NPM(K)    PM(K)     WS(K)    CPU(s)     Id  SI ProcessName
-------  ------    -----     -----    ------     --  -- -----------
    625      29    36736     32876      2.80   4696   1 AcroRd32
    987      85   300992    306536    100.30  13276   1 AcroRd32
    217      18     3300     10524      2.95  13988   1 AppleMobileDeviceProcess
    699      39     9808     34432      4.17  15184   1 ApplePhotoStreams
    272      17     5316     26280      0.27  12884   1 ApplicationFrameHost
    402      24     4580     14820      0.27  14396   1 APSDaemon
    123       8     1576      5468             4184   0 armsvc
    752      29    71892     85000             5724   0 aswEngSrv
   1011      26    34632     52828             5796   0 aswidsagent
   1053      33    43564     70488             4004   0 aswToolsSvc
    245      21     8928     13796    135.45   9536   0 audiodg
   5901     122   151064    225580             3464   0 AvastSvc
   2273      51    38980     56220     84.03  13068   1 AvastUI
    558      32    15116     38100      0.23  14652   1 AvastUI
    635      31    19540     38012      0.14  15064   1 AvastUI
    331      21    88856     61540      5.16    892   1 chrome
    370      19    45720     33040      0.52   1344   1 chrome
    259      18    89248     47444      6.03   1548   1 chrome
    367      27   128240    188224     14.67   2200   1 chrome
    343      23   115508    110596      8.36   2820   1 chrome
    319      20    53316     46484      1.05   2880   1 chrome
    277      17    24372     30176      0.63   3280   1 chrome
    318      19    29808     35660      0.34   3652   1 chrome
    349      22    95600     97704      5.11   3708   1 chrome
    319      22    89964     94336      5.86   4012   1 chrome
    972      34   230484    196360     30.58   4452   1 chrome
    315      21    89608     93464      4.94   4488   1 chrome
    322      21    89160     94016      6.25   4684   1 chrome
    247      17    20776     24660      0.13   5904   1 chrome
    348      22   136124    116576     12.59   6040   1 chrome
    319      21    89220     92876      5.88   6496   1 chrome
    249      17    20764     25032      0.14   7132   1 chrome
    333      22    59144     48656      1.98   7676   1 chrome
    264      17    23296     27176      0.14   8136   1 chrome
    408      10     6708      8076      0.02   8148   1 chrome
    245      17    19668     20756      0.13   8488   1 chrome
    334      22    90448     92332      7.14   9144   1 chrome
    349      22   134964    115868     12.92   9460   1 chrome
    347      22   133836    114844     12.06   9476   1 chrome
    264      18    32064     39080      2.52   9632   1 chrome
    250      16    14020     16068      0.22   9688   1 chrome
    256      19    43360     55684      4.52  10148   1 chrome
    435      36    30724     38852     10.97  10820   1 chrome
    283      18   101880     62344     12.63  11628   1 chrome
    828      48   183744     57652      6.47  11708   1 chrome
    245      17    20440     20908      0.34  12148   1 chrome
    269      17    33916     28364      0.41  12324   1 chrome
    288      20    88628     94940      6.39  12616   1 chrome
    261      14    18824     17312      1.41  12672   1 chrome
    245      17    20344     20672      0.14  12912   1 chrome
    300      19    49056     39308      0.69  13108   1 chrome
    234      16    19280     21456      0.06  13240   1 chrome
    287      19    47572     38452      0.58  14580   1 chrome
   2786     103   238188    268860    372.95  15392   1 chrome
    367      22    97684     98964      7.91  15928   1 chrome
    330      22    91824     94968      6.08  16112   1 chrome
    137       8     2948      7512      0.06   3236   1 cmd
    270      14     4412     17024      0.11   4456   1 conhost
    100       7     6328      4204             8280   1 conhost
    100       7     6312      5644             9252   1 conhost
    100       7     6316       540      0.05  11304   1 conhost
    124      10     6812      7012      0.06  12628   1 conhost
```

7. Listázza ki az adott meghajtón lévő szolgálatásokat

```
PS C:\Users\Dzsama> Get-Service | ft name, status -AutoSize

Name                                              Status
----                                              ------
AarSvc_6dc5c                                      Running
AdobeARMservice                                   Running
AJRouter                                          Stopped
ALG                                               Stopped
AppIDSvc                                          Stopped
Appinfo                                           Running
AppMgmt                                           Stopped
AppReadiness                                      Stopped
AppVClient                                        Stopped
AppXSvc                                           Stopped
AssignedAccessManagerSvc                          Stopped
aswbIDSAgent                                      Running
AudioEndpointBuilder                              Running
Audiosrv                                          Running
autotimesvc                                       Stopped
avast! Antivirus                                  Running
avast! Tools                                      Running
AvastWscReporter                                  Running
AxInstSV                                          Stopped
BcastDVRUserService_6dc5c                         Stopped
BDESVC                                            Stopped
BEService                                         Stopped
BFE                                               Running
BITS                                              Stopped
BluetoothUserService_6dc5c                        Stopped
BrokerInfrastructure                              Running
BTAGService                                       Stopped
BthAvctpSvc                                       Running
bthserv                                           Stopped
camsvc                                            Running
CaptureService_6dc5c                              Stopped
cbdhsvc_6dc5c                                     Running
CDPSvc                                            Running
CDPUserSvc_6dc5c                                  Running
CertPropSvc                                       Running
ClipSVC                                           Stopped
COMSysApp                                         Stopped
ConsentUxUserSvc_6dc5c                            Stopped
CoreMessagingRegistrar                            Running
CorsairGamingAudioConfig                          Running
CorsairLLAService                                 Running
CorsairService                                    Running
CredentialEnrollmentManagerUserSvc_6dc5c Stopped
CryptSvc                                          Running
CscService                                        Stopped
DcomLaunch                                        Running
defragsvc                                         Stopped
DeviceAssociationBrokerSvc_6dc5c                  Stopped
DeviceAssociationService                          Running
DeviceInstall                                     Running
DevicePickerUserSvc_6dc5c                         Stopped
DevicesFlowUserSvc_6dc5c                          Stopped
DevQueryBroker                                    Running
Dhcp                                              Running
diagnosticshub.standardcollector.service Stopped
diagsvc                                           Stopped
DiagTrack                                         Running
DialogBlockingService                             Stopped
Disc Soft Lite Bus Service                        Stopped
DispBrokerDesktopSvc                              Running
DisplayEnhancementService                         Stopped
DmEnrollmentSvc                                   Stopped
dmwappushservice                                  Stopped
Dnscache                                          Running
DoSvc                                             Stopped
dot3svc                                           Stopped
```

8. Rendezze sorba név szerint (növekvő/csökkenő) az objektumokat!

```
PS C:\Users\Dzsama> Get-Process | Sort-Object name -Descending

Handles  NPM(K)    PM(K)     WS(K)   CPU(s)     Id  SI ProcessName
-------  ------    -----     -----   ------     --  -- -----------
    246      11     2004      5572            3752   0 WUDFHost
    340      11     4848     12928            2168   0 wsc_proxy
    173      10     3308      8464            6388   0 WmiPrvSE
   1492      77   147908    136404    84.92  15332   1 WINWORD
    555      28     9364     33848     2.58   8960   1 WinRAR
    273      13     2916     10448            1152   1 winlogon
    161      11     1432      5392             844   0 wininit
     69       4     2020      6696     0.08   5876   1 VirtualBoxVM
     76       4     1980      4648     0.16   6948   1 VirtualBoxVM
   1243     213   124908    138084   524.67  11016   1 VirtualBoxVM
    434      22    61348     46740     1.42  11680   1 VirtualBox
    934      17     7612     17332     1.30  10456   1 VBoxSVC
    187      10     2308      8672           10848   0 VBoxSDS
    118      10     2012      8796     0.03   7164   1 UserOOBEBroker
    121       7     1496      6092            3648   0 unsecapp
    301      16     6988     19472    12.36  13668   1 TranslucentTB
    554      24    20200     41216     1.52   2588   1 TextInputHost
    307      33     7032     16192     0.30   7188   1 taskhostw
   4915       0      192       140               4   0 System
    150      10     1700      6952            2784   0 svchost
    213      13     2148      7296            2656   0 svchost
    182       9     2028      6664            2812   0 svchost
    324      15     3808      8620            2988   0 svchost
    264      16     3132      8508            2872   0 svchost
    229      12     2428      9724            2296   0 svchost
    119       8     1416      5880            2232   0 svchost
    221      14     2160      7676            2396   0 svchost
    515      12     3264      8508            2468   0 svchost
    181      10     2092      6920            2436   0 svchost
    148       9     1776      6472            3016   0 svchost
    127      10     1784      5504            3412   0 svchost
    357      14     2344      7988            3404   0 svchost
    208      14     2460     10992            3456   0 svchost
    760      81    33500     29672            3672   0 svchost
    429      32    14572     14148            3656   0 svchost
    185      10     1904      6848            3100   0 svchost
    291       9     2320      6892            3024   0 svchost
    196      10     1900      6796            3188   0 svchost
    196      10     8432     16496            3384   0 svchost
    500      14     4420     17900            3296   0 svchost
    286       9     2156     10716            1492   0 svchost
    214      12     2200      8348            1484   0 svchost
    402      17     6576     14912            1512   0 svchost
    422      13    13724     13388            1644   0 svchost
    152      13     1792      5456            1612   0 svchost
```

9. Kérdezze le a Windows időt!

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

Status   Name               DisplayName
------   ----               -----------
Stopped  W32Time            Windows Time
```

10. Kérdezze le azokat a neveket melynek első két betűje wi!

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

Status    Name              DisplayName
------    ----              -----------
Stopped   WiaRpc            Still Image Acquisition Events
Stopped   WinDefend         Microsoft Defender Antivirus Service
Running   WinHttpAutoProx... WinHTTP Web Proxy Auto-Discovery Se...
Running   Winmgmt           Windows Management Instrumentation
Stopped   WinRM             Windows Remote Management (WS-Manag...
Stopped   wisvc             Windows Insider Service
```

11. Számolja meg az objektumokat!

```
PS C:\Users\Dzsama> Get-Process | Measure-Object


Count    : 237
Average  :
Sum      :
Maximum  :
Minimum  :
Property :
```

1**2.** Számolj meg az objektumok: max, min, avg, sum szerint!

```
PS C:\Users\Dzsama> Get-Process | Measure-Object -Property id -Maximum -Minimum -Average -Sum


Count    : 241
Average  : 6962.48962655602
Sum      : 1677960
Maximum  : 17160
Minimum  : 0
Property : Id
```

13. Számolja meg az objektumokat!

```
PS C:\Users\Dzsama> (Get-Service).count
288
```

14. Kérdezze le a tagokat!

```
PS C:\Users\Dzsama> $x = 5
PS C:\Users\Dzsama> $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)
```
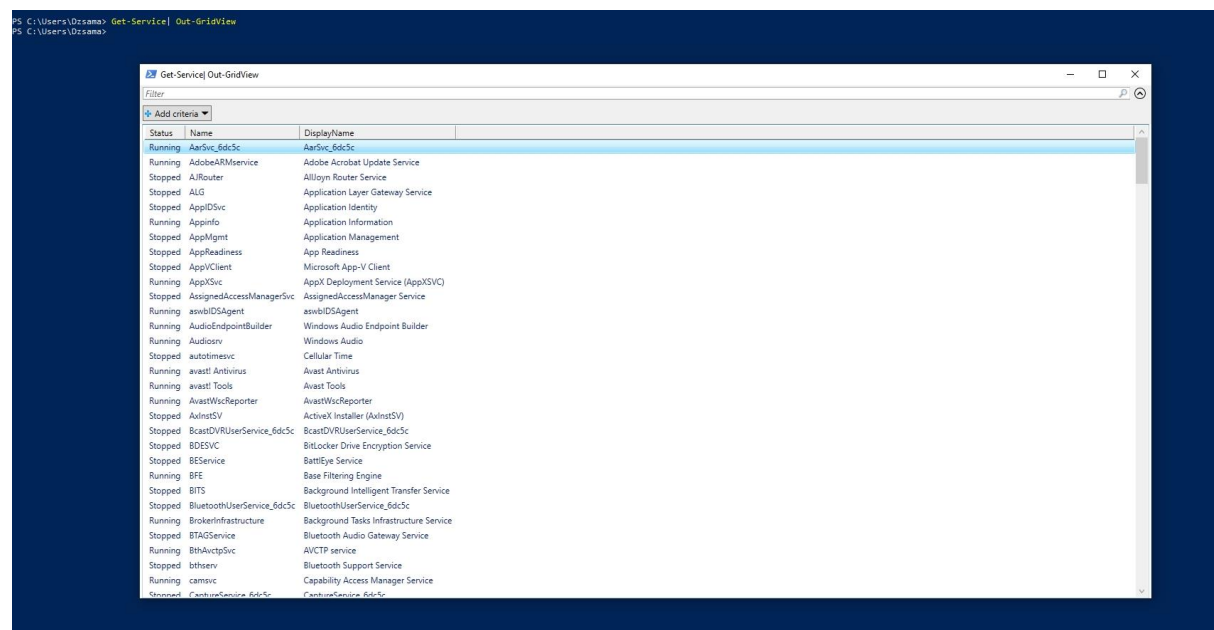
15. Hozzon létre egy szoveg nevű változót, melynek értéke: Miskolc

```
PS C:\Users\Dzsama> $szoveg = "Miskolc"
PS C:\Users\Dzsama> "$szoveg-on élek."
Miskolc-on élek.
```

16. Végezze el a következő műveleteket a $szoveg változó értékeivel

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

17. Kimenet átirányítása

```
PS C:\Users\Dzsama> Get-Service| Out-GridView
PS C:\Users\Dzsama>
```