



PowerShell from *nix user perspective

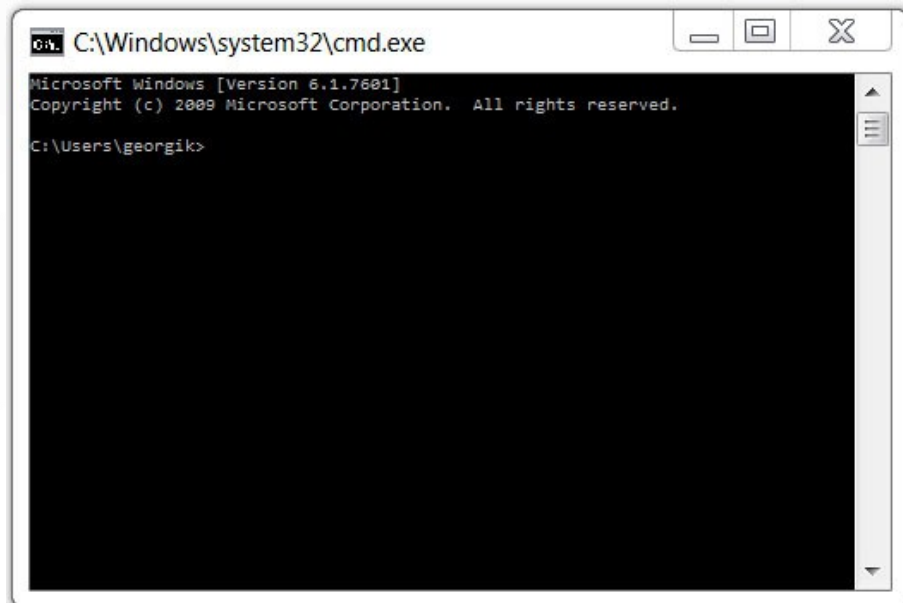
- ▼ Juraj Michálek – <http://georgik.sinusgear.com>
- ▼ 2. 10. 2013
- ▼ EurOpen.CZ – Vranov nad Dyjí

Examples @github



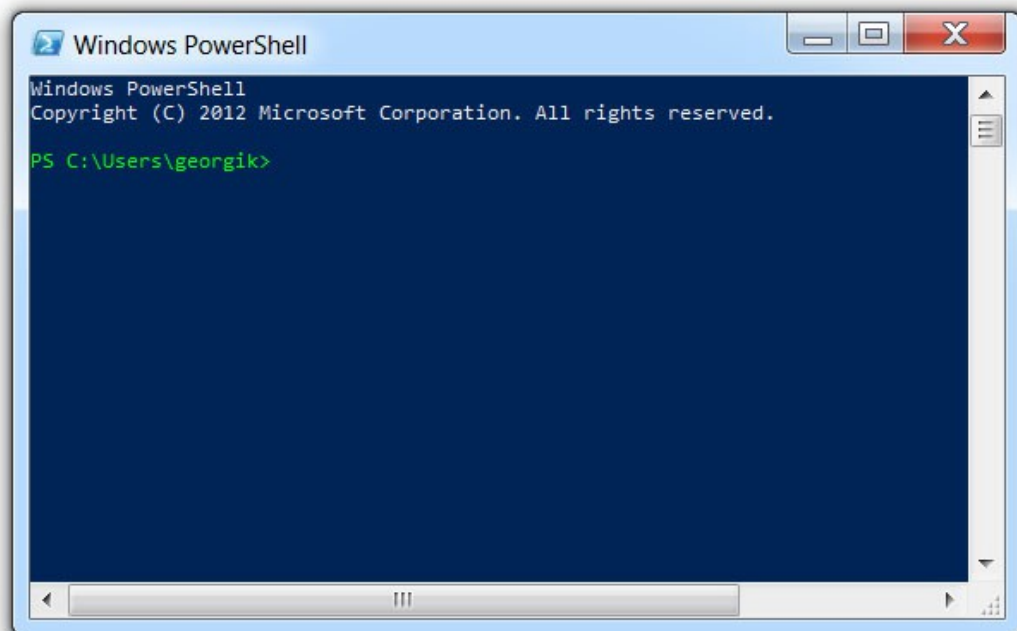
▼ <https://github.com/georgik/powershell-examples>

Where's the difference?



A screenshot of a Windows Command Prompt window. The title bar reads "C:\Windows\system32\cmd.exe". The window has a black background with white text. The text displayed is: "Microsoft Windows [Version 6.1.7601] Copyright (c) 2009 Microsoft Corporation. All rights reserved. C:\Users\georgik>".

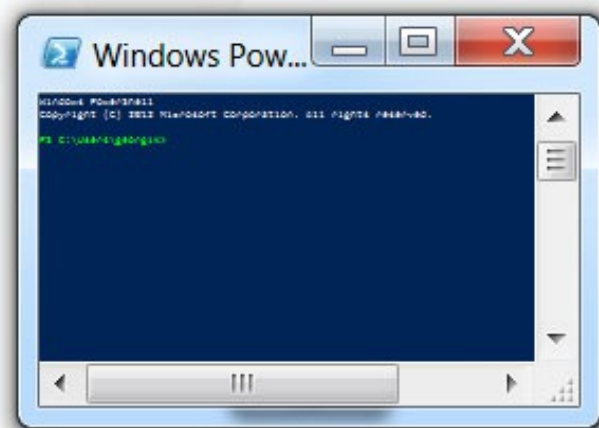
```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\Users\georgik>
```



A screenshot of a Windows PowerShell window. The title bar reads "Windows PowerShell". The window has a dark blue background with white text. The text displayed is: "Windows PowerShell Copyright (C) 2012 Microsoft Corporation. All rights reserved. PS C:\Users\georgik>".

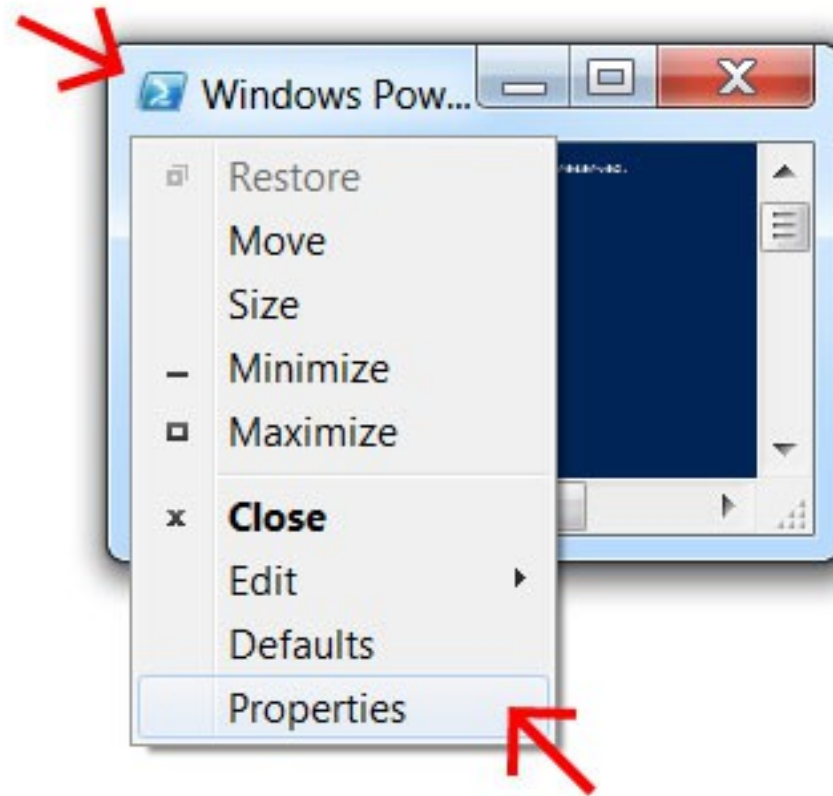
```
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.
PS C:\Users\georgik>
```

Minimalistic approach?

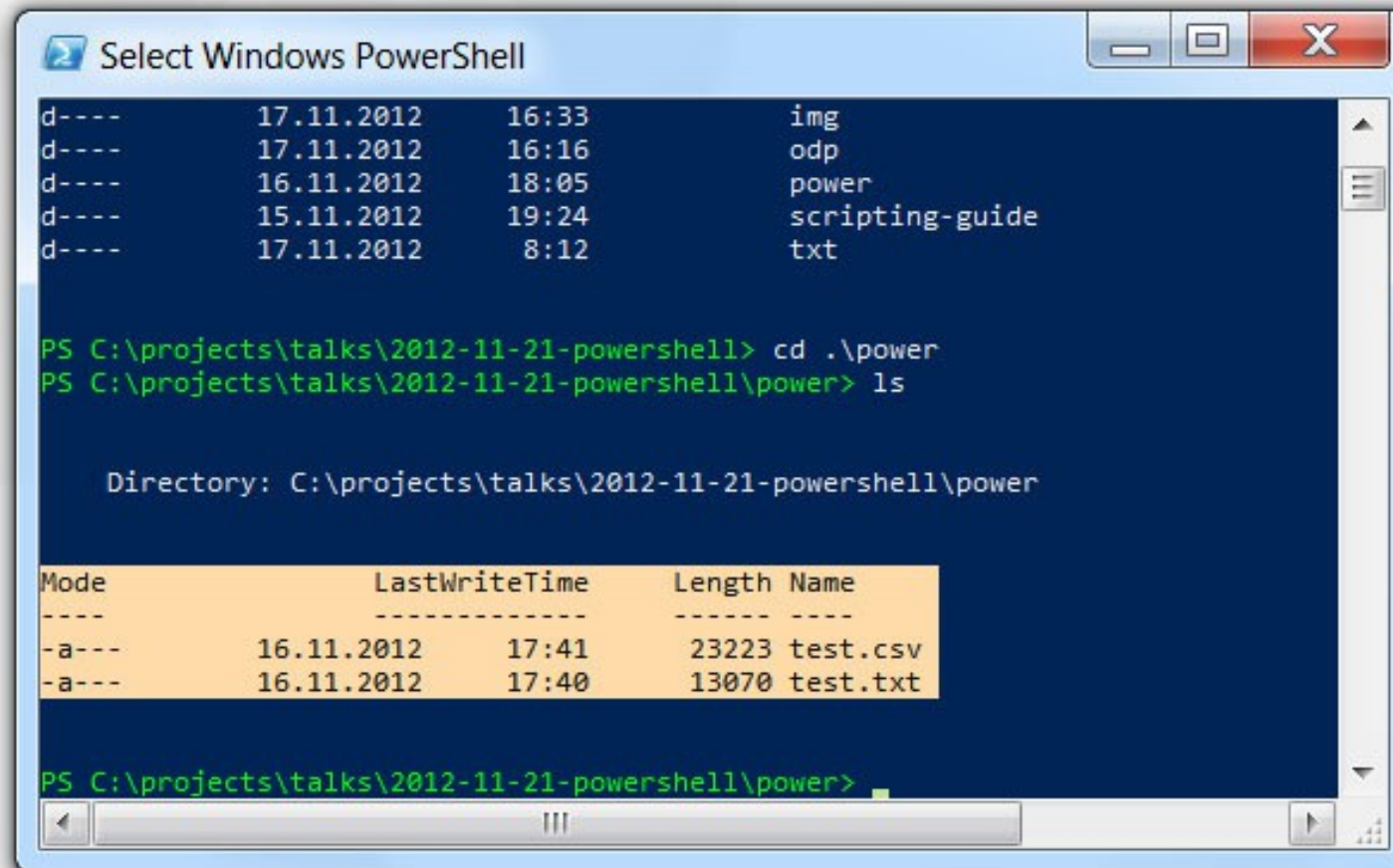


After installing some Windows updates...

Change font size



Copy & paste text



The screenshot shows a Windows PowerShell window titled "Select Windows PowerShell". The window displays a directory listing of files in the current directory. The files listed are:

Mode	LastWriteTime	Length	Name
d----	17.11.2012 16:33		img
d----	17.11.2012 16:16		odp
d----	16.11.2012 18:05		power
d----	15.11.2012 19:24		scripting-guide
d----	17.11.2012 8:12		txt

The user has navigated to the directory `C:\projects\talks\2012-11-21-powershell\power` and executed the `ls` command. The output shows a table of files in the current directory:

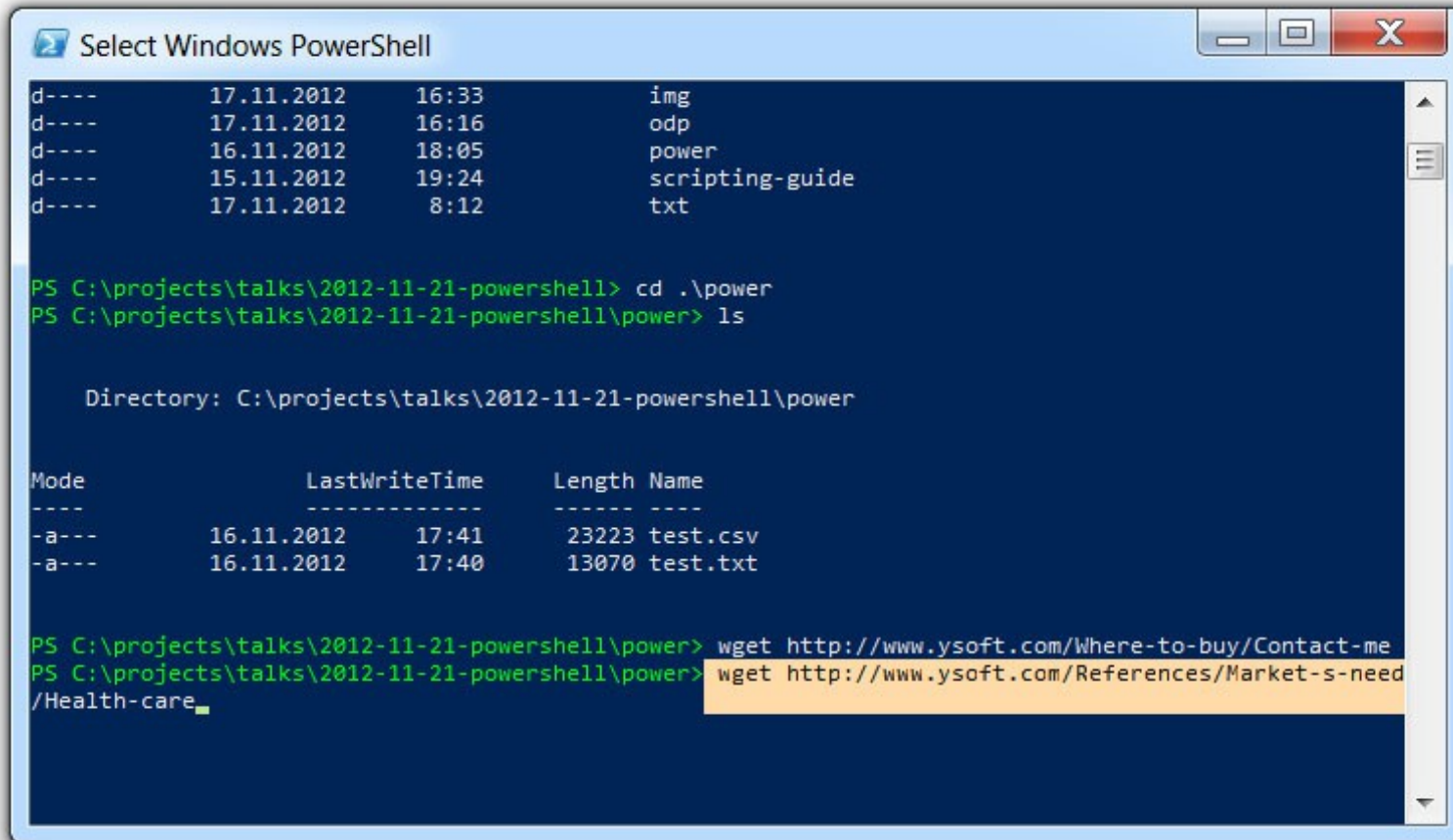
Mode	LastWriteTime	Length	Name
-a---	16.11.2012 17:41	23223	test.csv
-a---	16.11.2012 17:40	13070	test.txt

The user is currently at the prompt `PS C:\projects\talks\2012-11-21-powershell\power>`.

Click & drag to select,
Enter to copy to clipboard
Right click to paste

Multi-line selection?

FAIL



The screenshot shows a Windows PowerShell window titled "Select Windows PowerShell". The window contains a list of files and folders, followed by a directory listing and two wget commands. The second wget command is highlighted with a yellow selection box, demonstrating a multi-line selection.

```
d----      17.11.2012      16:33      img
d----      17.11.2012      16:16      odp
d----      16.11.2012      18:05      power
d----      15.11.2012      19:24      scripting-guide
d----      17.11.2012      8:12      txt

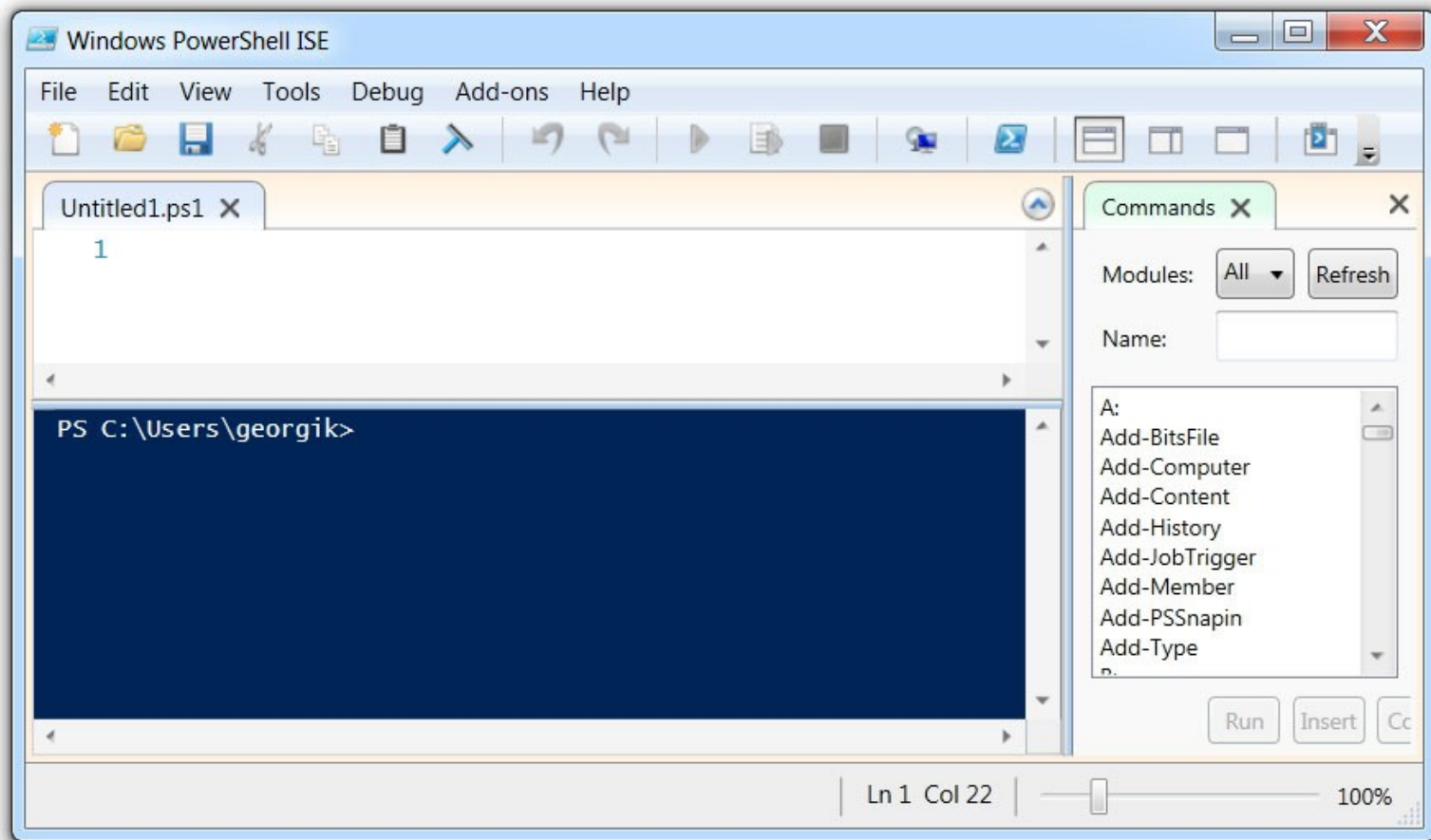
PS C:\projects\talks\2012-11-21-powershell> cd .\power
PS C:\projects\talks\2012-11-21-powershell\power> ls

Directory: C:\projects\talks\2012-11-21-powershell\power

Mode                LastWriteTime         Length Name
----                -
-a---             16.11.2012         17:41     23223 test.csv
-a---             16.11.2012         17:40     13070 test.txt

PS C:\projects\talks\2012-11-21-powershell\power> wget http://www.ysoft.com/Where-to-buy/Contact-me
PS C:\projects\talks\2012-11-21-powershell\power> wget http://www.ysoft.com/References/Market-s-need
/Health-care_
```

PowerShell ISE

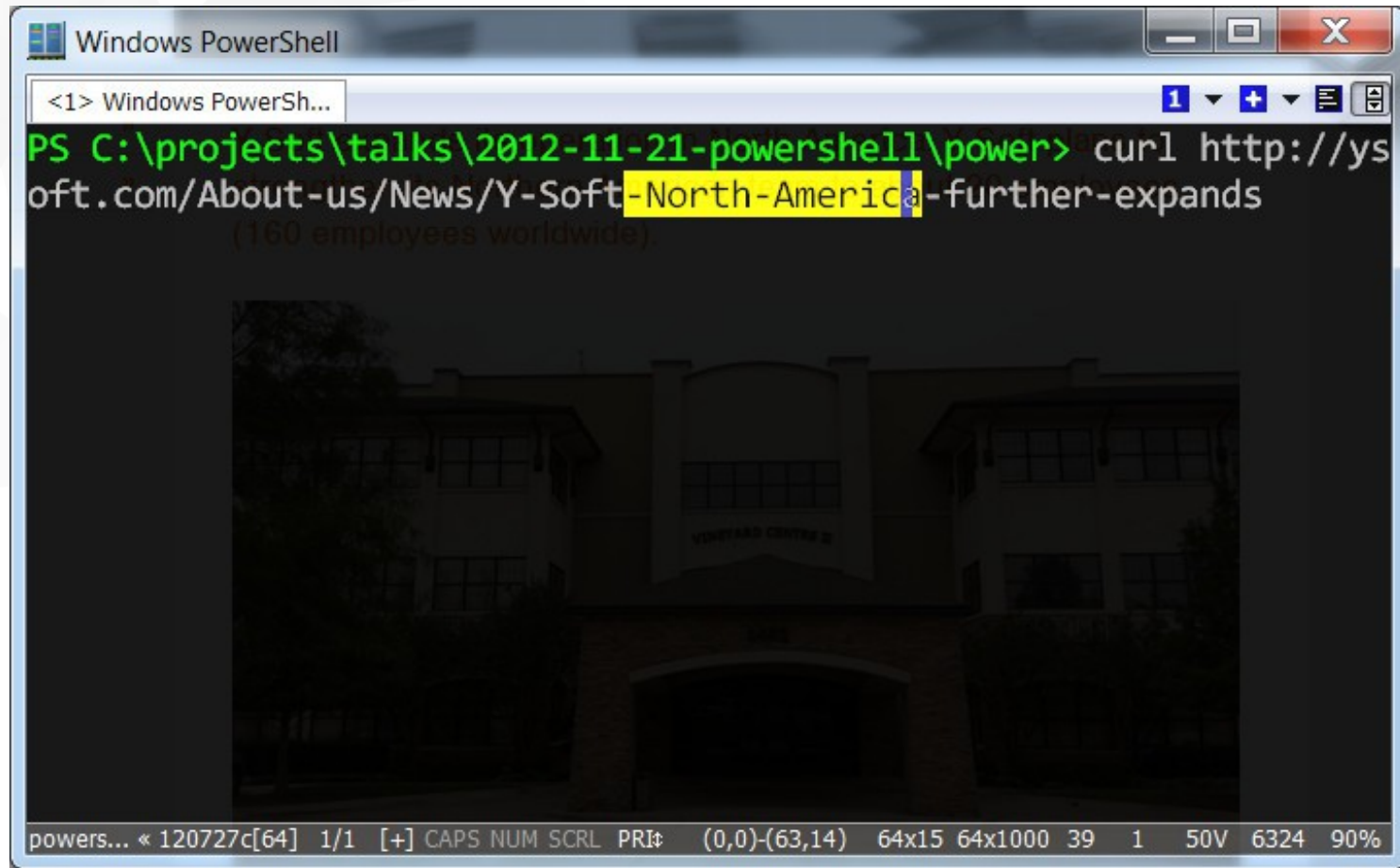


ConEmu




<http://code.google.com/p/conemu-maximus5/>

Text selection



The image shows a Windows PowerShell terminal window. The title bar reads "Windows PowerShell". The command prompt shows the current directory as `C:\projects\talks\2012-11-21-powershell\power`. A `curl` command is executed, fetching a webpage. The output shows the URL `http://ysoft.com/About-us/News/Y-Soft-North-America-further-expands` with the text "North-America" highlighted in yellow. Below the URL, the text "(160 employees worldwide)" is visible. The terminal window also displays a status bar at the bottom with various system information.

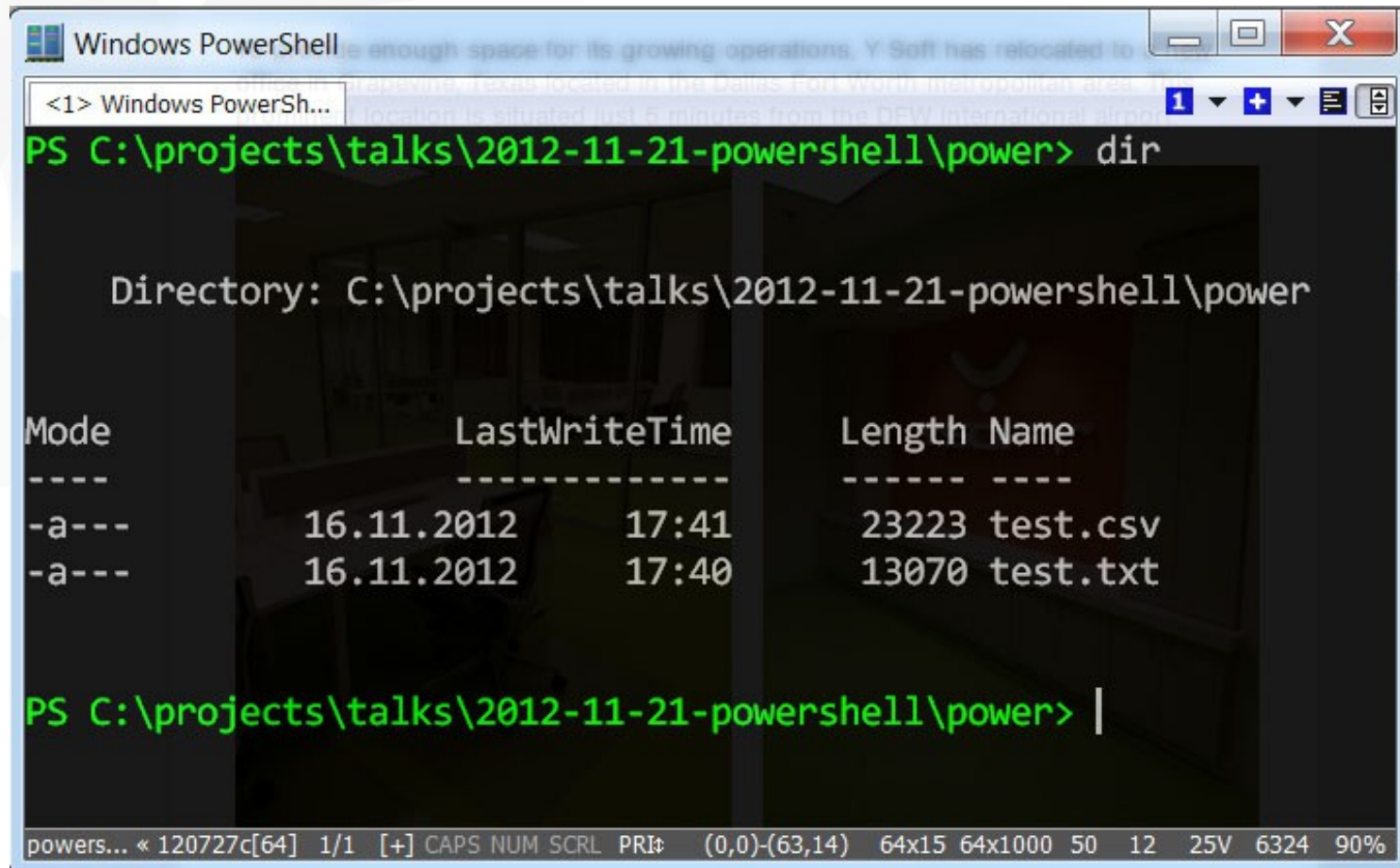
```
Windows PowerShell
<1> Windows PowerSh...
PS C:\projects\talks\2012-11-21-powershell\power> curl http://ysoft.com/About-us/News/Y-Soft-North-America-further-expands
(160 employees worldwide)

powershell < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI (0,0)-(63,14) 64x15 64x1000 39 1 50V 6324 90%
```

Default: Shift+Click to mark and copy

Zoom In/Out

- ▼ CTRL + mouse wheel
 - ▼ PowerShell ISE
 - ▼ ConEmu

Commands from CMD.EXE works



```
Windows PowerShell
PS C:\projects\talks\2012-11-21-powershell\power> dir

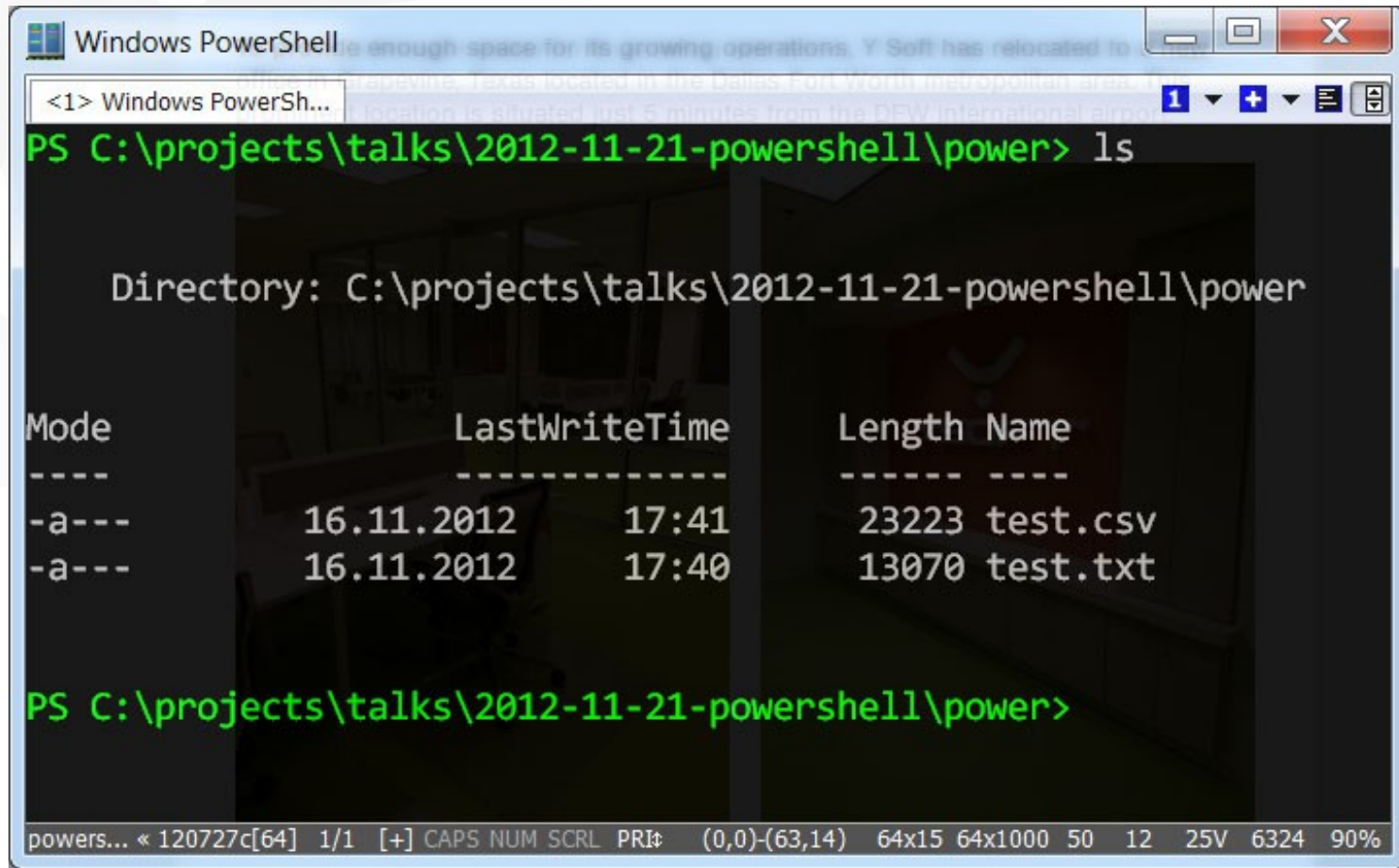
Directory: C:\projects\talks\2012-11-21-powershell\power

Mode                LastWriteTime         Length Name
----                -
-a---              16.11.2012   17:41         23223 test.csv
-a---              16.11.2012   17:40         13070 test.txt

PS C:\projects\talks\2012-11-21-powershell\power> |
```

The screenshot shows a Windows PowerShell window with a dark background and green text. The title bar reads "Windows PowerShell". The command prompt shows the current directory as "C:\projects\talks\2012-11-21-powershell\power". The user has entered the command "dir", and the output displays a directory listing for "C:\projects\talks\2012-11-21-powershell\power". The listing includes columns for Mode, LastWriteTime, Length, and Name. Two files are listed: "test.csv" (23223 bytes, last written 16.11.2012 at 17:41) and "test.txt" (13070 bytes, last written 16.11.2012 at 17:40). The prompt is currently at "PS C:\projects\talks\2012-11-21-powershell\power> |".

Unix like commands



The screenshot shows a Windows PowerShell window with a dark background and green text. The title bar reads "Windows PowerShell". The command prompt shows the current directory as "C:\projects\talks\2012-11-21-powershell\power" and the command "ls" has been executed. The output displays a directory listing with columns for Mode, LastWriteTime, Length, and Name. Two files are listed: "test.csv" and "test.txt".

```
PS C:\projects\talks\2012-11-21-powershell\power> ls

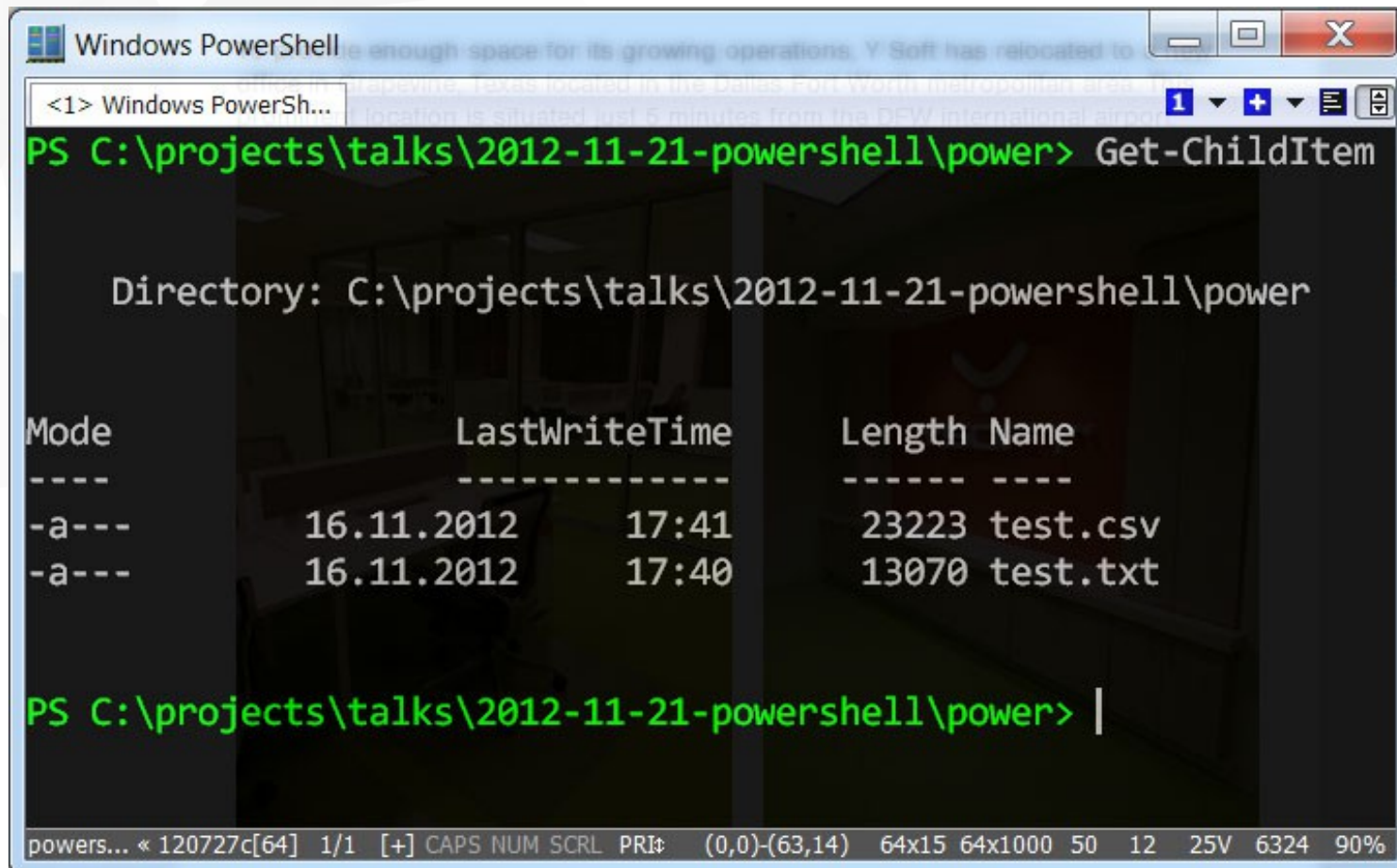
Directory: C:\projects\talks\2012-11-21-powershell\power

Mode                LastWriteTime         Length Name
----                -
-a---              16.11.2012   17:41     23223 test.csv
-a---              16.11.2012   17:40     13070 test.txt

PS C:\projects\talks\2012-11-21-powershell\power>
```

powershell < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI (0,0)-(63,14) 64x15 64x1000 50 12 25V 6324 90%

Cmdlets



```
Windows PowerShell
PS C:\projects\talks\2012-11-21-powershell\power> Get-ChildItem

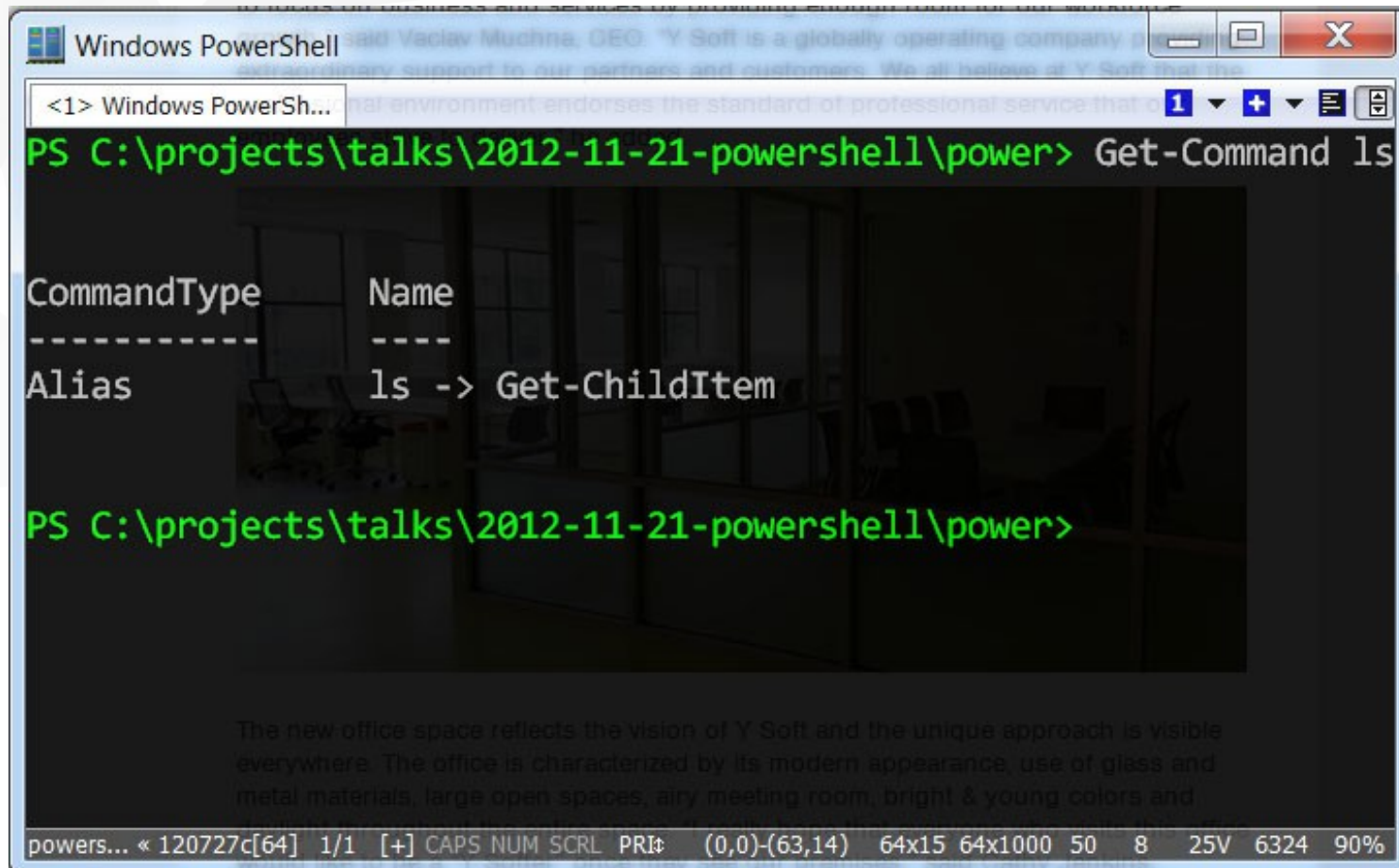
Directory: C:\projects\talks\2012-11-21-powershell\power

Mode                LastWriteTime         Length Name
----                -
-a---              16.11.2012   17:41         23223 test.csv
-a---              16.11.2012   17:40         13070 test.txt

PS C:\projects\talks\2012-11-21-powershell\power> |
```

The screenshot shows a Windows PowerShell window with a dark background and green text. The title bar reads "Windows PowerShell". The command prompt shows the current directory as `C:\projects\talks\2012-11-21-powershell\power` and the command `Get-ChildItem` has been executed. The output displays a directory listing for the current path, showing two files: `test.csv` and `test.txt`. The output is formatted as a table with columns for Mode, LastWriteTime, Length, and Name. The status bar at the bottom shows system information like memory usage and window dimensions.

Get-Command



```
Windows PowerShell
PS C:\projects\talks\2012-11-21-powershell\power> Get-Command ls

CommandType      Name
-----
Alias            ls -> Get-ChildItem

PS C:\projects\talks\2012-11-21-powershell\power>
```

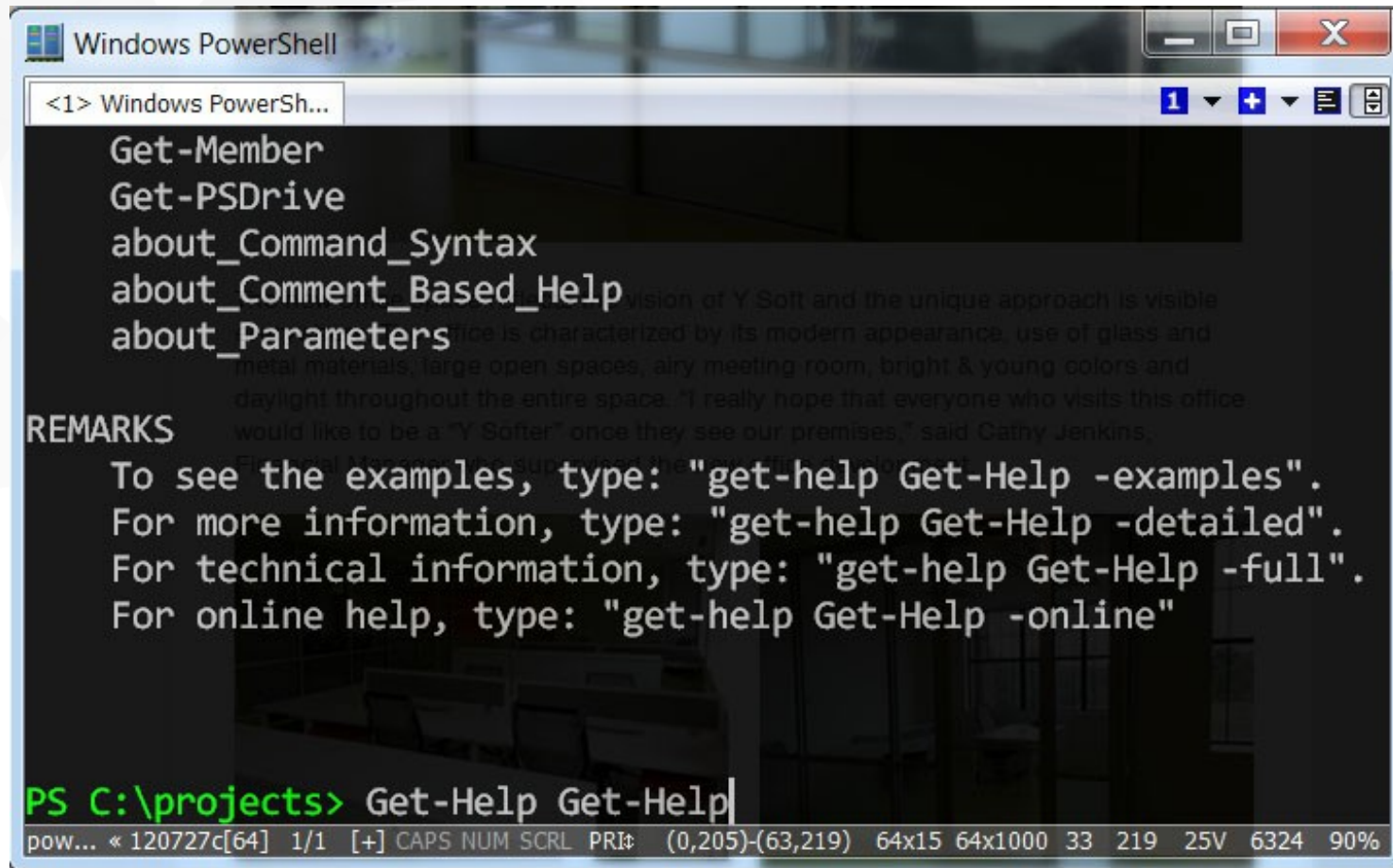
The new office space reflects the vision of Y Soft and the unique approach is visible everywhere. The office is characterized by its modern appearance, use of glass and metal materials, large open spaces, airy meeting room, bright & young colors and

powers... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI\$ (0,0)-(63,14) 64x15 64x1000 50 8 25V 6324 90%

Useful shortcuts

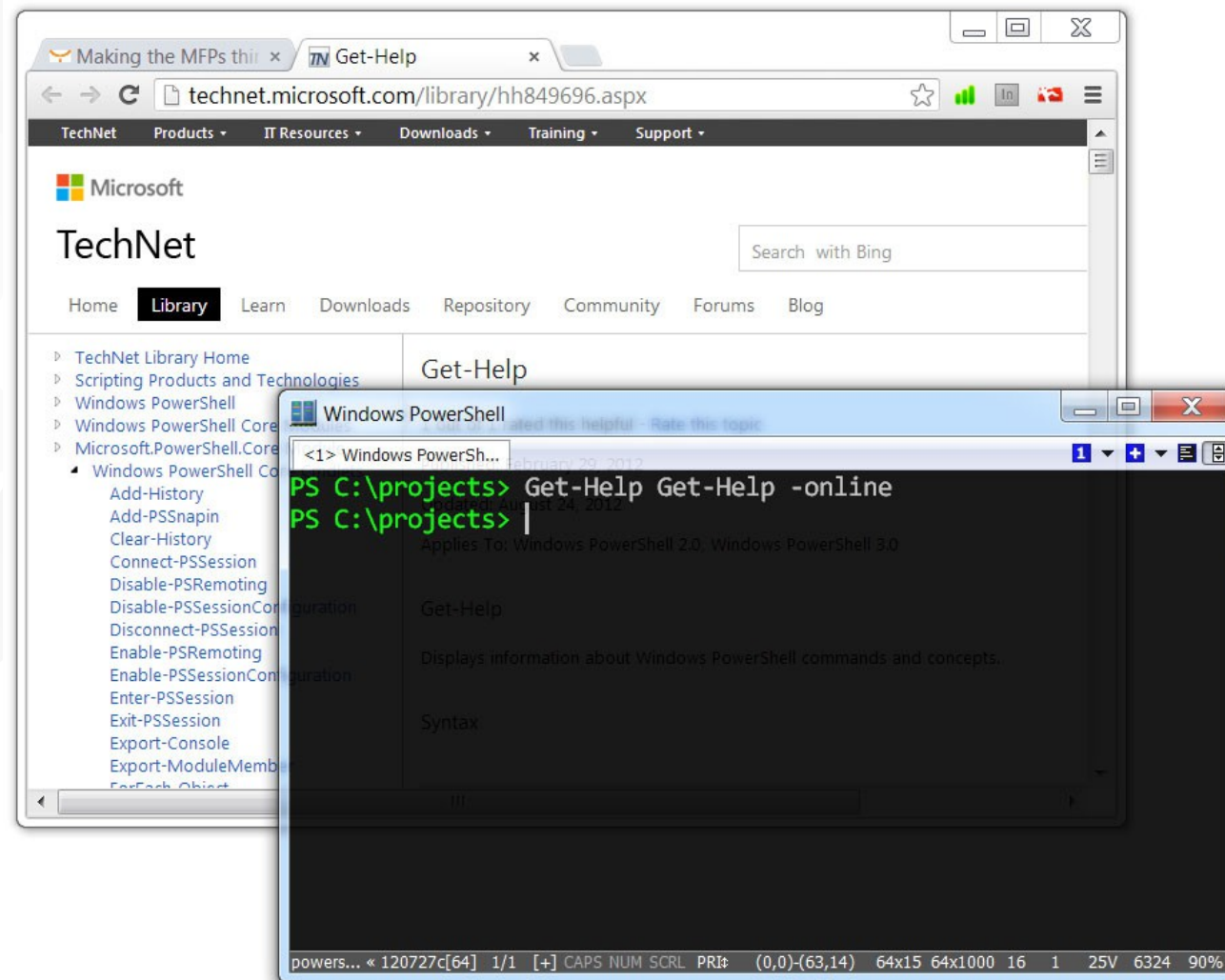
- ▼ TAB – complete/expand/suggest
- ▼ Shift+Tab – previous hint/suggestion
- ▼ CTRL+C – cancel current line
- ▼ Up/Down – navigate in history

Get-Help

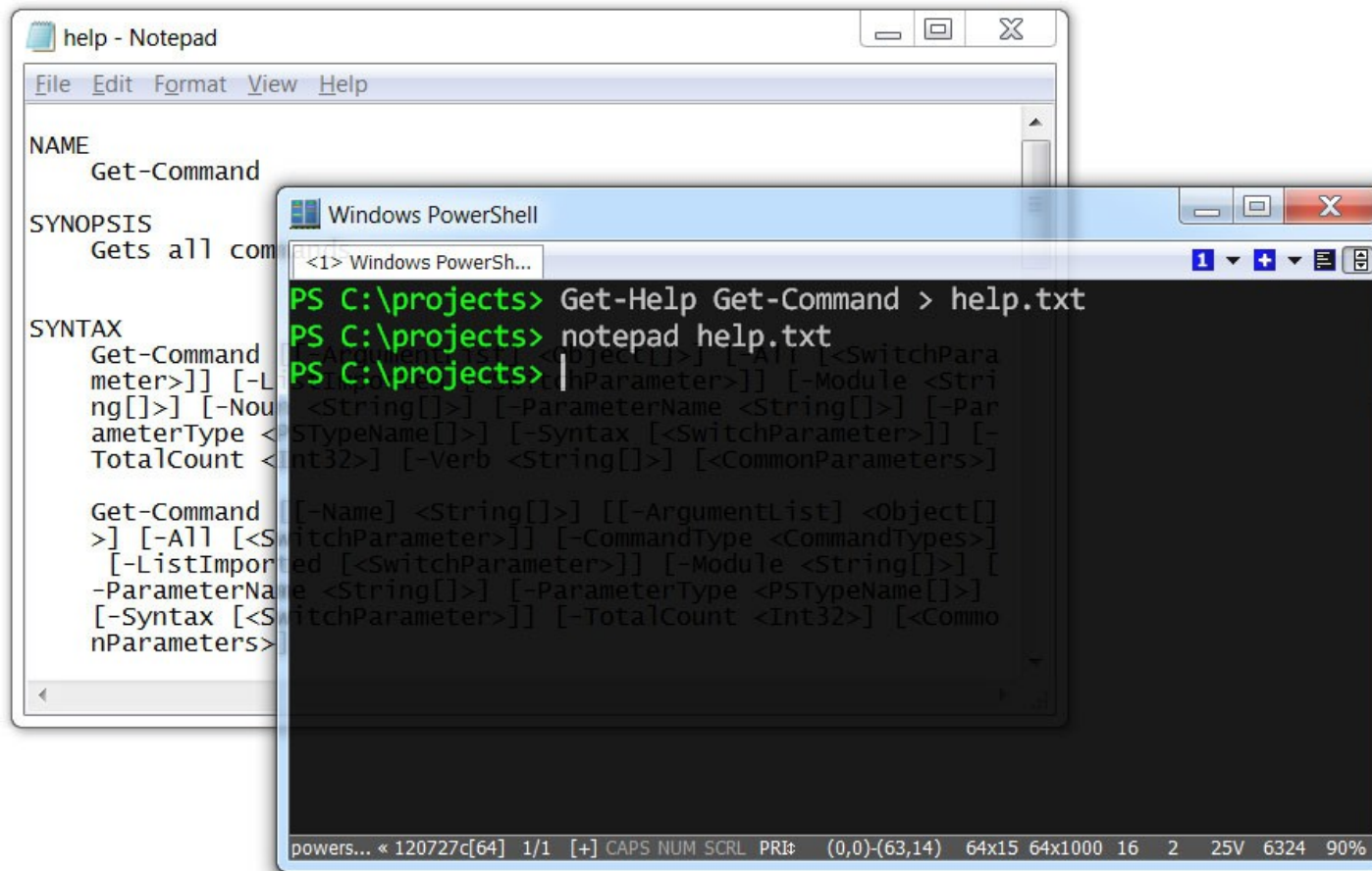


```
Windows PowerShell
<1> Windows PowerSh...
Get-Member
Get-PSDrive
about_Command_Syntax
about_Comment_Based_Help
about_Parameters
REMARKS
To see the examples, type: "get-help Get-Help -examples".
For more information, type: "get-help Get-Help -detailed".
For technical information, type: "get-help Get-Help -full".
For online help, type: "get-help Get-Help -online"
PS C:\projects> Get-Help Get-Help
pow... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI (0,205)-(63,219) 64x15 64x1000 33 219 25V 6324 90%
```

Get-Help -online



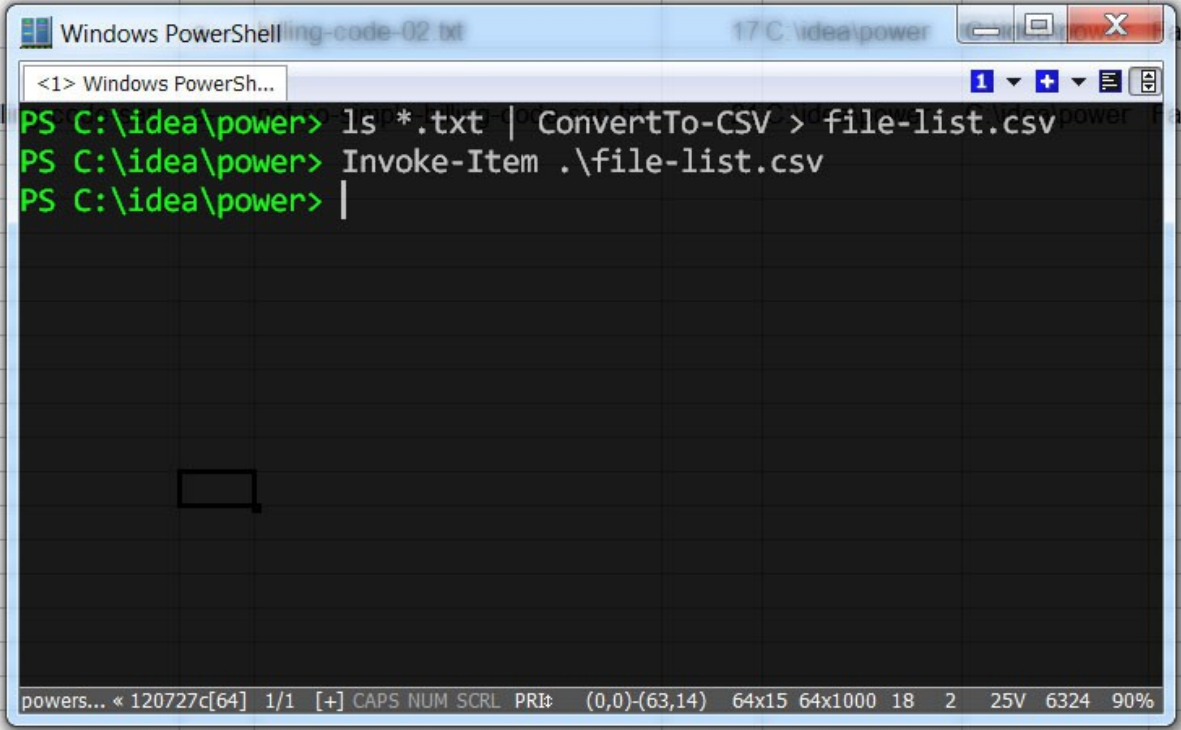
Redirect output to file >



Note: output files are in unicode (double characters)

Pipe |

	H	I	J	K	L	M	
1							
2	BaseName	Mode	Name	Length	DirectoryName	Directory	IsR
3	billing-code-01	-a---	billing-code-01.txt	6	C:\idea\power	C:\idea\power	Fal
4	billing-code-02						
5	not-so-simple-bill						
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

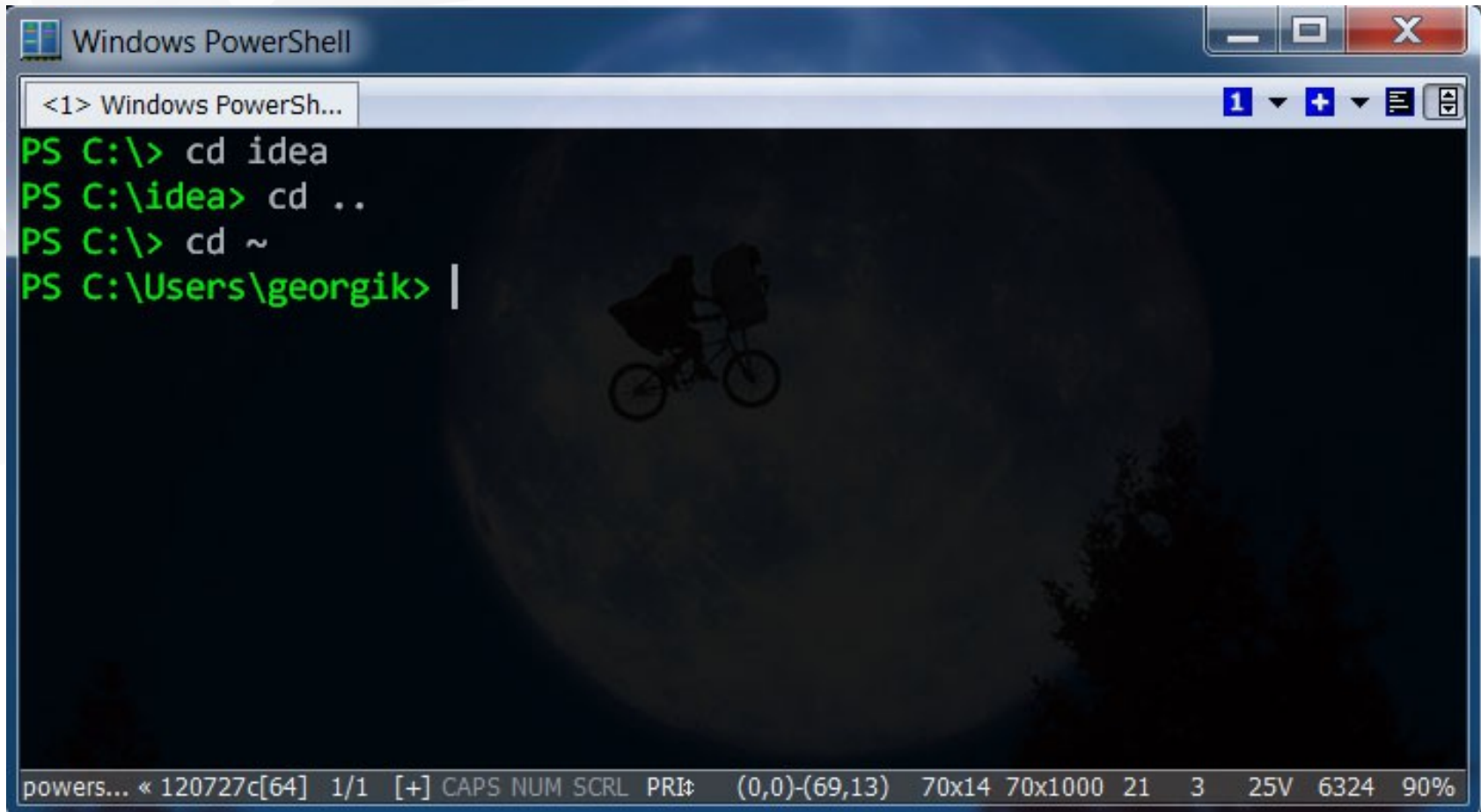


The screenshot shows a Windows PowerShell terminal window with the following commands and output:

```
PS C:\idea\power> ls *.txt | ConvertTo-CSV > file-list.csv
PS C:\idea\power> Invoke-Item .\file-list.csv
PS C:\idea\power> |
```

The terminal window title is "Windows PowerShell | ing-code-02.txt" and the current directory is "17 C:\idea\power". The status bar at the bottom shows "powers... « 120727c[64] 1/1 [+ CAPS NUM SCRL PRI# (0,0)-(63,14) 64x15 64x1000 18 2 25V 6324 90%".

cd

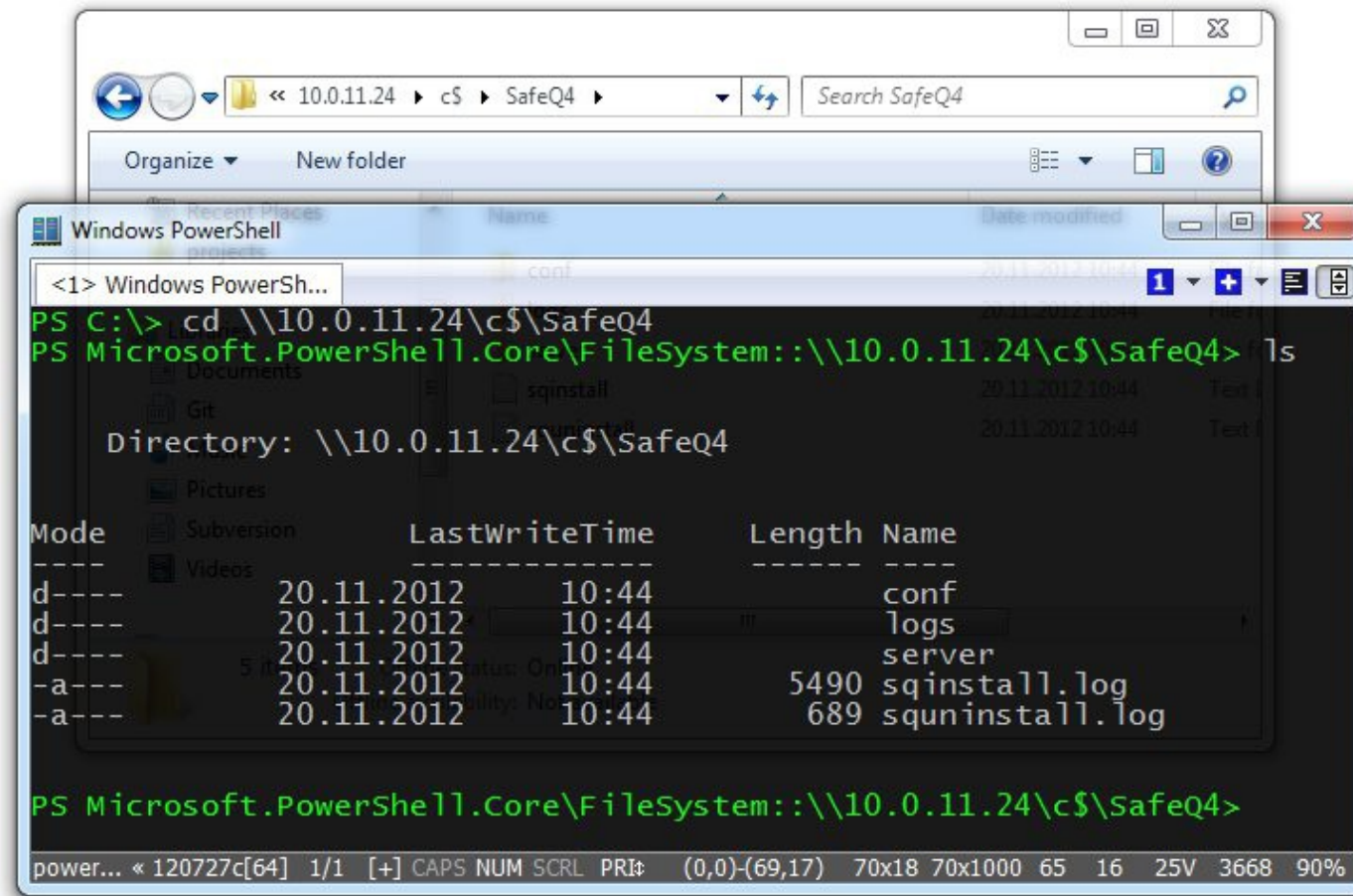


The image shows a Windows PowerShell terminal window with a dark background and green text. The window title is "Windows PowerShell". The command history shows the following sequence of commands and their resulting prompts:

```
<1> Windows PowerSh...  
PS C:\> cd idea  
PS C:\idea> cd ..  
PS C:\> cd ~  
PS C:\Users\georgik> |
```

The terminal also displays a status bar at the bottom with the following information: powers... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI: (0,0)-(69,13) 70x14 70x1000 21 3 25V 6324 90%

\\network\path



```
<1> Windows PowerSh...
PS C:\> cd \\10.0.11.24\c$\SafeQ4
PS Microsoft.PowerShell.Core\FileSystem: \\10.0.11.24\c$\SafeQ4> ls

Directory: \\10.0.11.24\c$\SafeQ4

Mode                LastWriteTime         Length Name
----                -
d-----           20.11.2012   10:44         conf
d-----           20.11.2012   10:44         logs
d-----           20.11.2012   10:44         server
-a----           20.11.2012   10:44        5490 sqinstall.log
-a----           20.11.2012   10:44         689 squninstall.log

PS Microsoft.PowerShell.Core\FileSystem: \\10.0.11.24\c$\SafeQ4>
```

power... < 120727c[64] 1/1 [+ CAPS NUM SCRL PRI# (0,0)-(69,17) 70x18 70x1000 65 16 25V 3668 90%

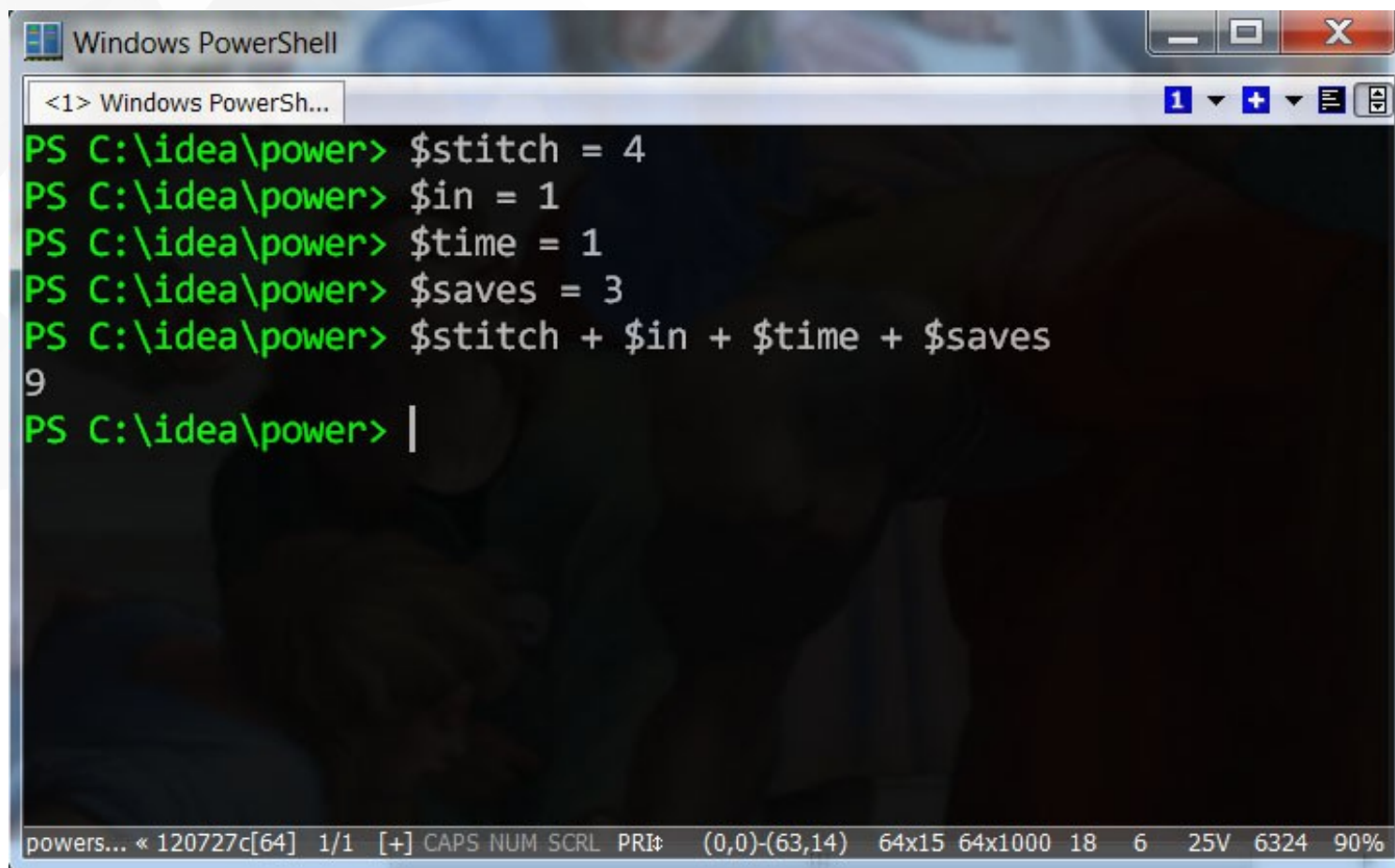
Mathematics



A screenshot of a Windows PowerShell terminal window. The window title is "Windows PowerShell". The prompt is "PS C:\idea\power>". The first command is $36+1+2+3$, and the output is 42. The second command is $(500.1*12)/1200$, and the output is 5,001. The third command is a blank line, and the prompt is still visible. The status bar at the bottom shows "powers... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI: (0,0)-(63,14) 64x15 64x1000 18 4 25V 6324 90%".

```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> 36+1+2+3
42
PS C:\idea\power> (500.1*12)/1200
5,001
PS C:\idea\power> |
powers... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI: (0,0)-(63,14) 64x15 64x1000 18 4 25V 6324 90%
```

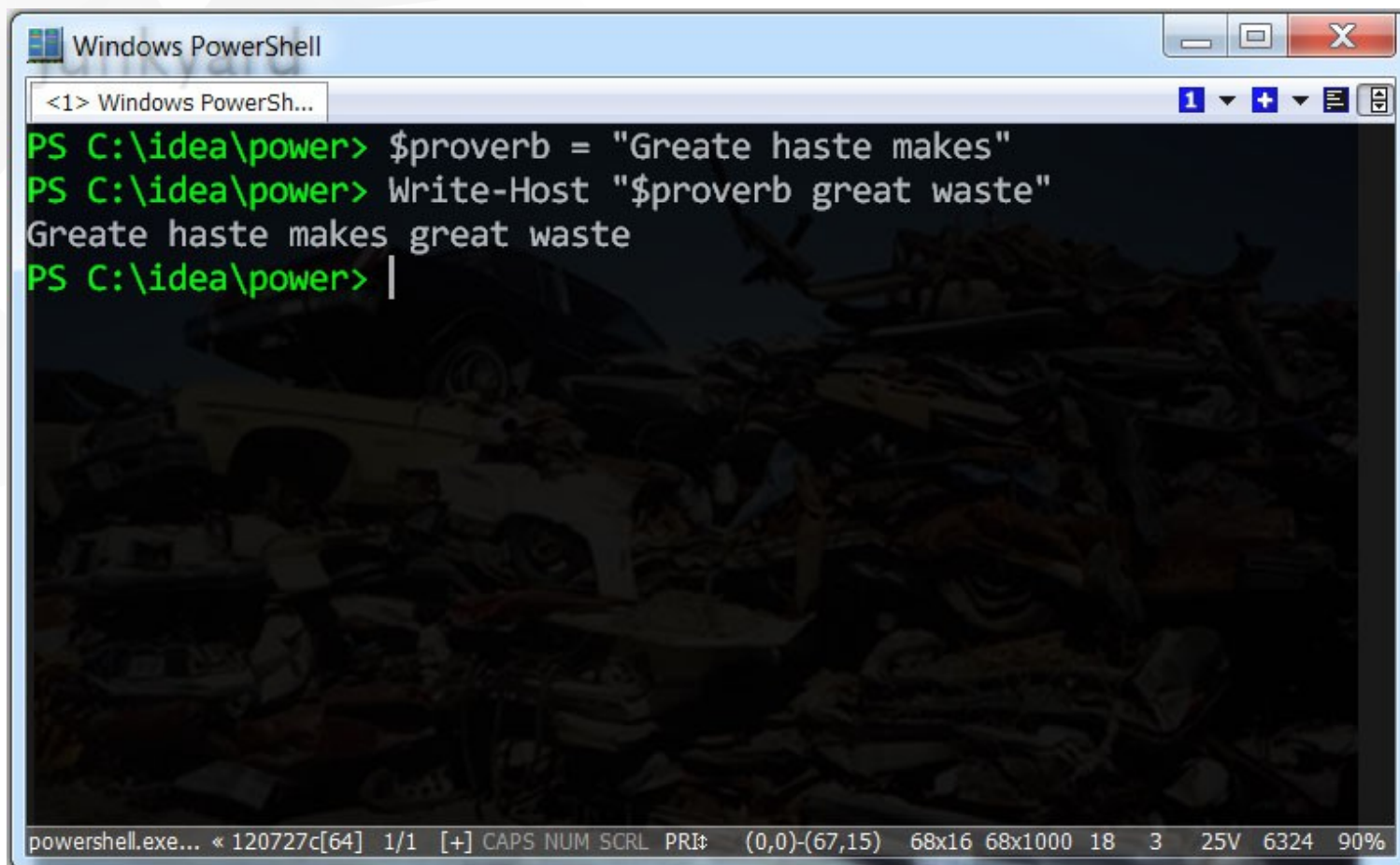
Variables



```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> $stitch = 4
PS C:\idea\power> $in = 1
PS C:\idea\power> $time = 1
PS C:\idea\power> $saves = 3
PS C:\idea\power> $stitch + $in + $time + $saves
9
PS C:\idea\power> |
```

powers... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI# (0,0)-(63,14) 64x15 64x1000 18 6 25V 6324 90%

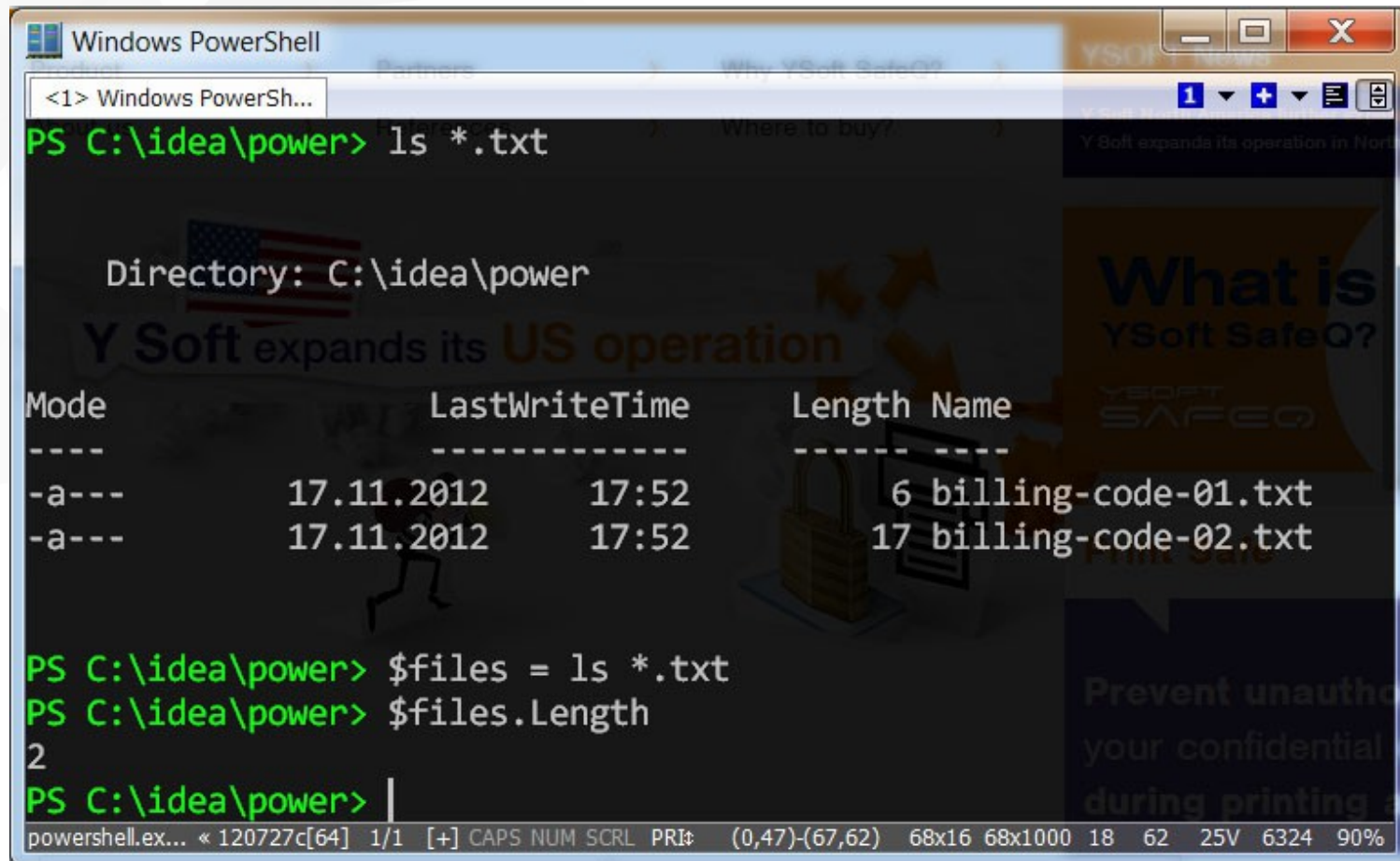
Write-Host



```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> $proverb = "Greate haste makes"
PS C:\idea\power> Write-Host "$proverb great waste"
Greate haste makes great waste
PS C:\idea\power> |
```

powershell.exe... * 120727c[64] 1/1 [+] CAPS NUM SCRL PRI\$ (0,0)-(67,15) 68x16 68x1000 18 3 25V 6324 90%

Output of cmdlet to variable



```
Windows PowerShell
<> Windows PowerSh...
PS C:\idea\power> ls *.txt

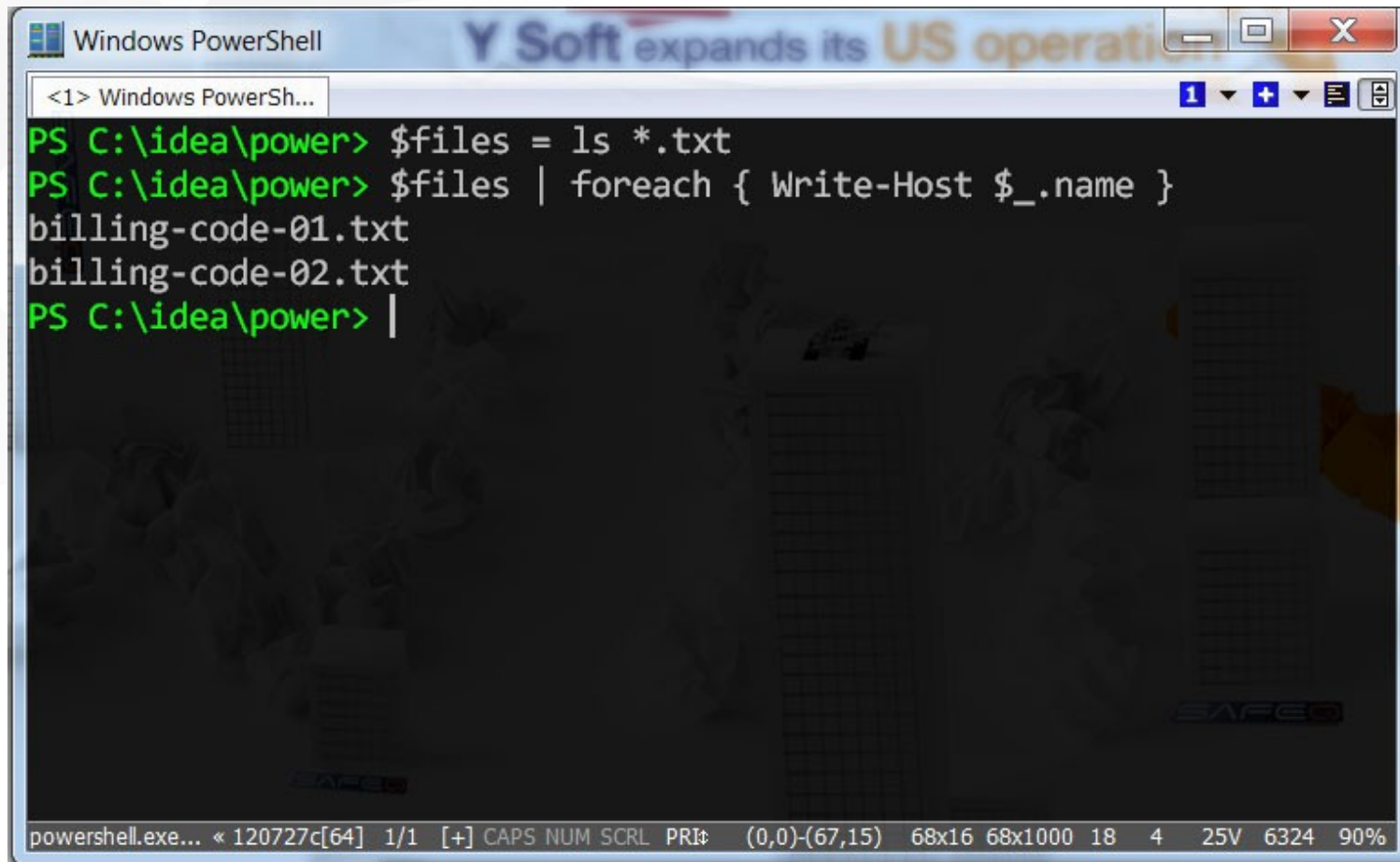
Directory: C:\idea\power

Mode                LastWriteTime         Length Name
----                -
-a---              17.11.2012   17:52             6 billing-code-01.txt
-a---              17.11.2012   17:52            17 billing-code-02.txt

PS C:\idea\power> $files = ls *.txt
PS C:\idea\power> $files.Length
2
PS C:\idea\power> |
```

powershell.ex... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI: (0,47)-(67,62) 68x16 68x1000 18 62 25V 6324 90%

Foreach



```
Windows PowerShell
Y Soft expands its US operation

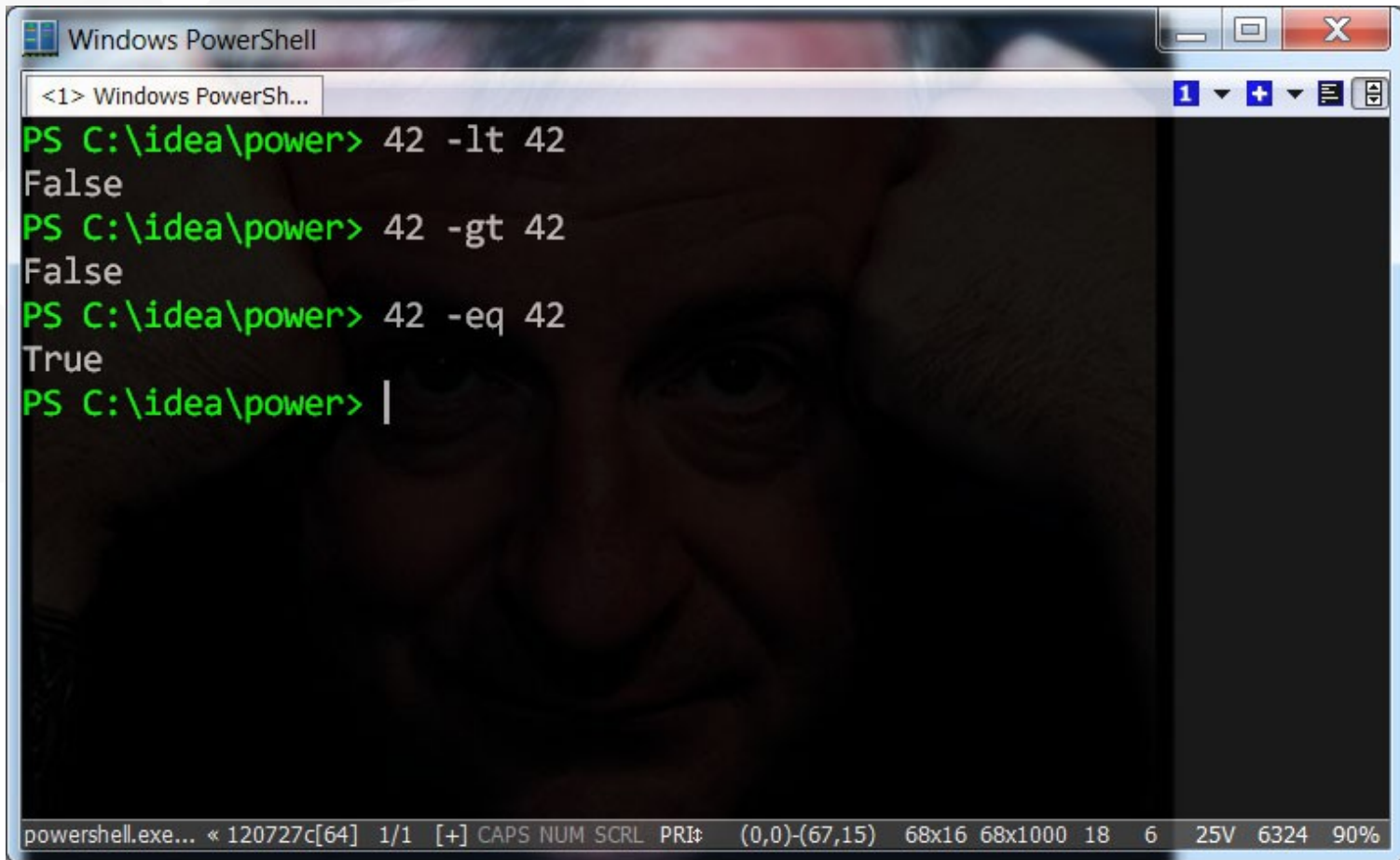
<1> Windows PowerSh...
PS C:\idea\power> $files = ls *.txt
PS C:\idea\power> $files | foreach { Write-Host $_.name }
billing-code-01.txt
billing-code-02.txt
PS C:\idea\power> |
```

powershell.exe... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI\$ (0,0)-(67,15) 68x16 68x1000 18 4 25V 6324 90%

Special variables

- ▼ `$_` - instance piped into command
- ▼ `$?` - true/false – success of last command
- ▼ `$args` – parameters for function
- ▼ `$HOME` – user's home
- ▼ `$LASTEXITCODE` – exit code of last process

Compare

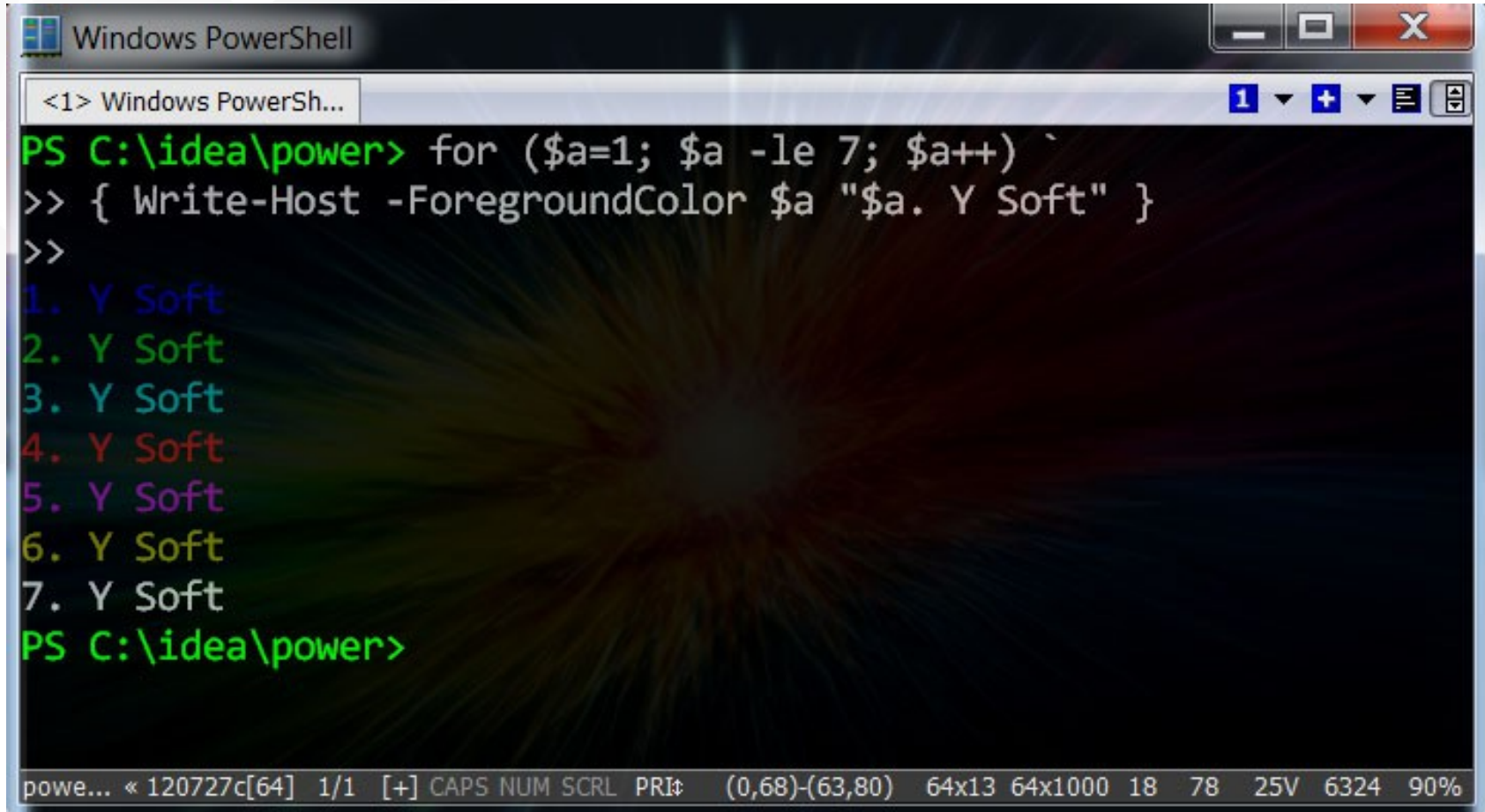


A screenshot of a Windows PowerShell terminal window. The window title is "Windows PowerShell". The command prompt shows the following commands and their outputs:

```
PS C:\idea\power> 42 -lt 42  
False  
PS C:\idea\power> 42 -gt 42  
False  
PS C:\idea\power> 42 -eq 42  
True  
PS C:\idea\power> |
```

The status bar at the bottom of the window displays: powershell.exe... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI# (0,0)-(67,15) 68x16 68x1000 18 6 25V 6324 90%

For

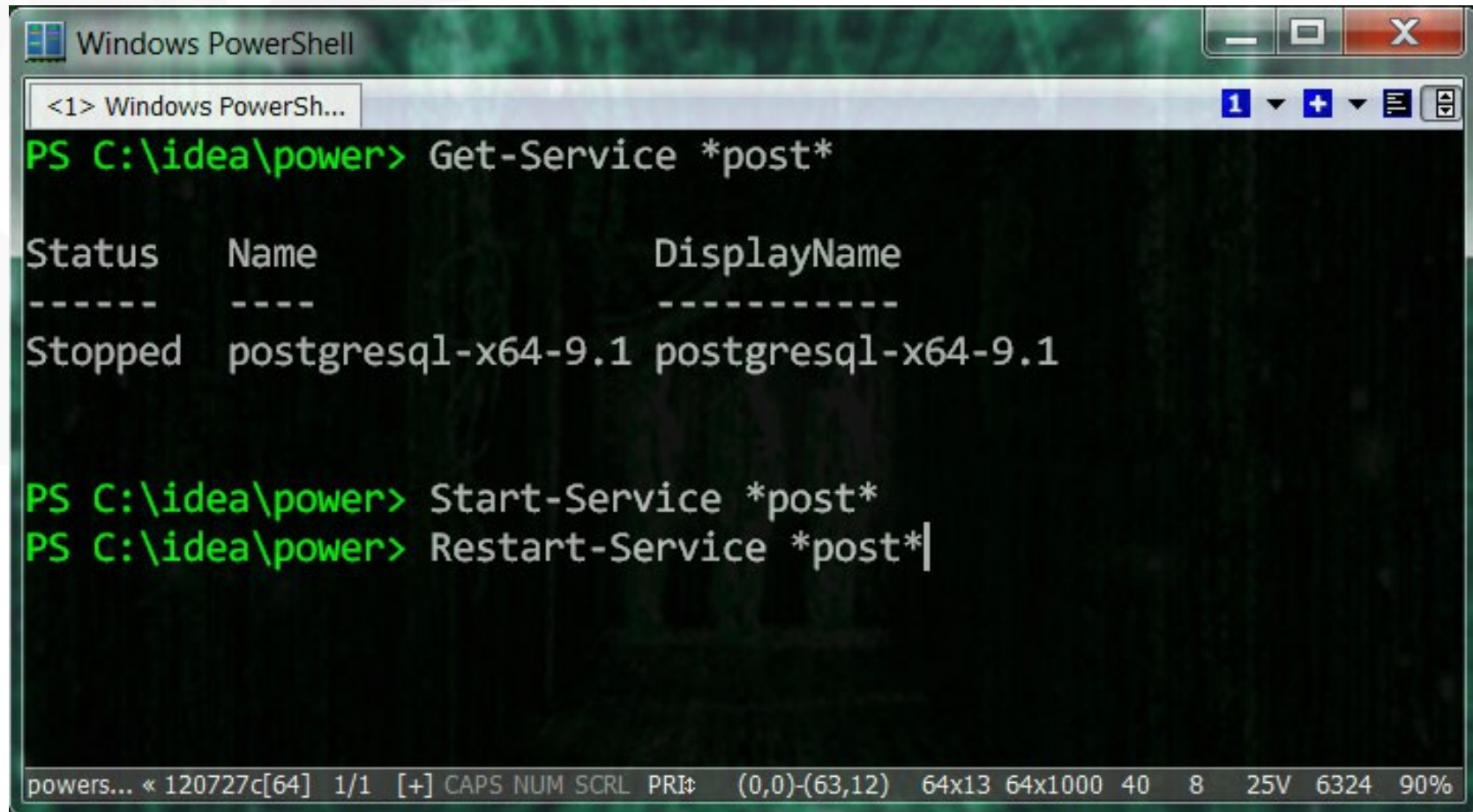


```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> for ($a=1; $a -le 7; $a++) `
>> { Write-Host -ForegroundColor $a "$a. Y Soft" }
>>
1. Y Soft
2. Y Soft
3. Y Soft
4. Y Soft
5. Y Soft
6. Y Soft
7. Y Soft
PS C:\idea\power>
```

power... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI: (0,68)-(63,80) 64x13 64x1000 18 78 25V 6324 90%

` indicates that command will continue on next line

*-Service



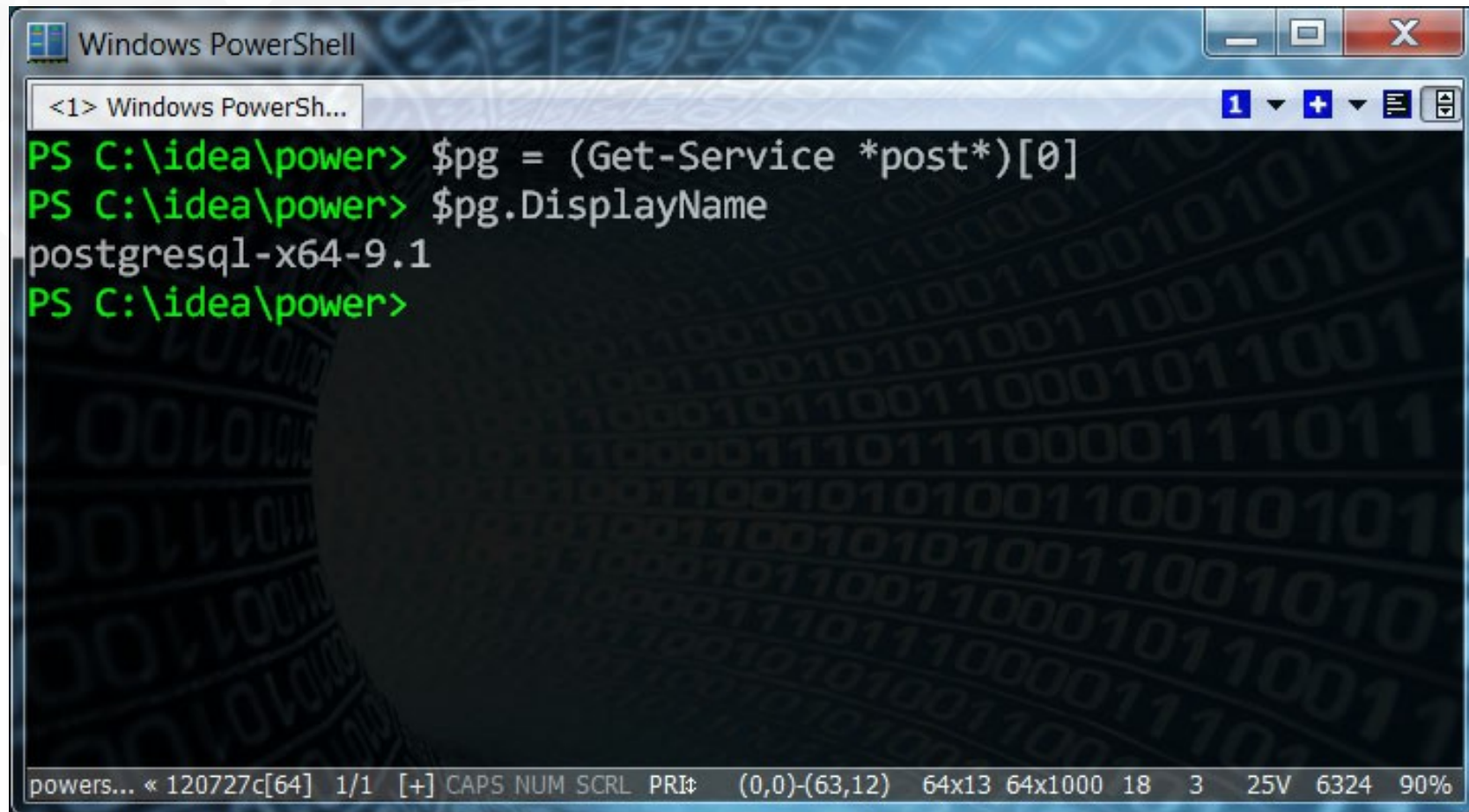
```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> Get-Service *post*

Status      Name                DisplayName
-----      -
Stopped     postgresql-x64-9.1 postgresql-x64-9.1

PS C:\idea\power> Start-Service *post*
PS C:\idea\power> Restart-Service *post*
```

powers... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI↑ (0,0)-(63,12) 64x13 64x1000 40 8 25V 6324 90%

Array []



```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> $pg = (Get-Service *post*)[0]
PS C:\idea\power> $pg.DisplayName
postgresql-x64-9.1
PS C:\idea\power>
```

The screenshot shows a Windows PowerShell window with a dark background and green text. The window title is "Windows PowerShell". The command prompt shows the user navigating to the directory "C:\idea\power". The first command executed is "\$pg = (Get-Service *post*)[0]", which retrieves the first service object for PostgreSQL. The second command is "\$pg.DisplayName", which outputs "postgresql-x64-9.1". The prompt then returns to "PS C:\idea\power>". The status bar at the bottom of the window displays various system and window information, including "powers... < 120727c[64] 1/1 [+ CAPS NUM SCRL PRI (0,0)-(63,12) 64x13 64x1000 18 3 25V 6324 90%".

Get-Member

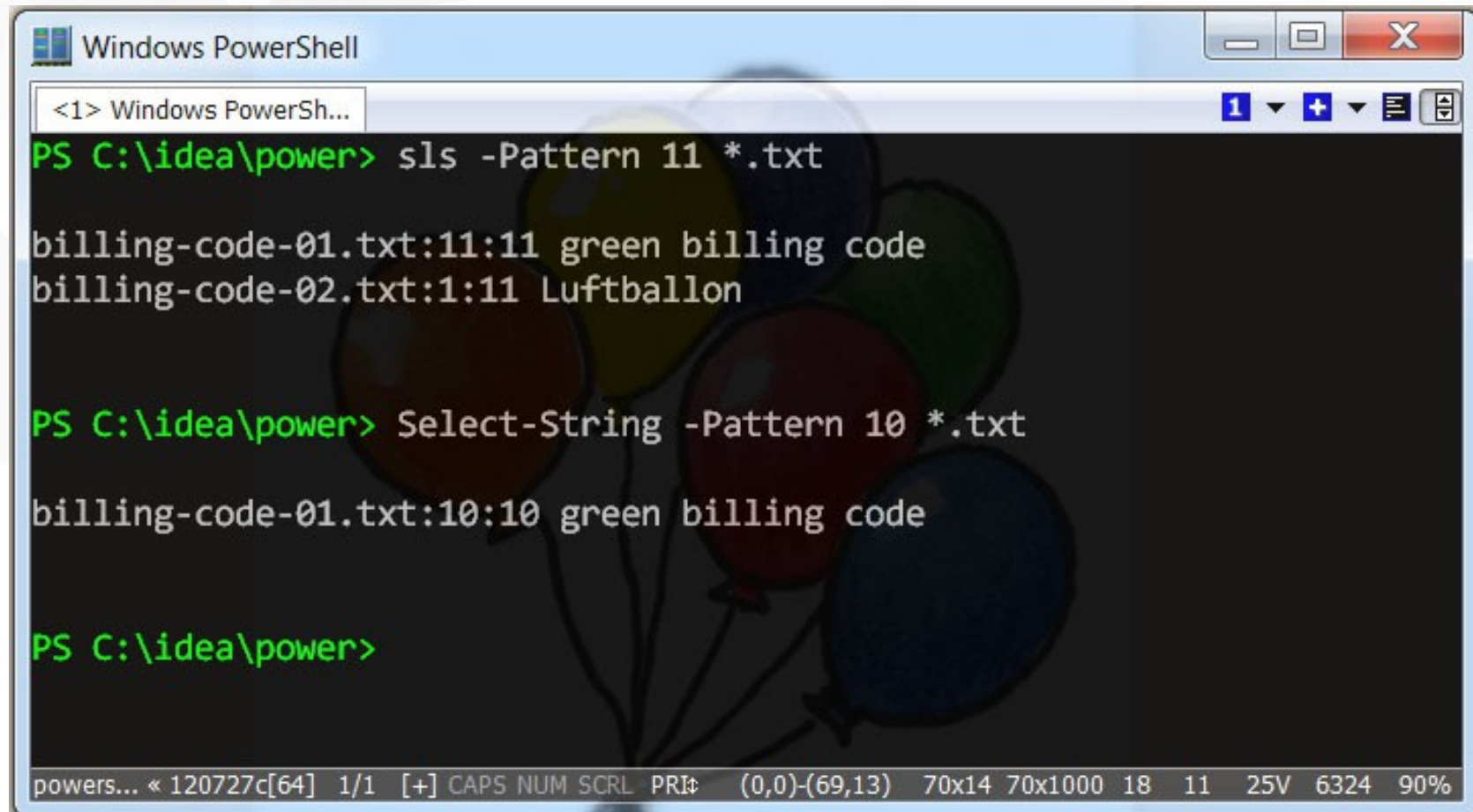
```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> $pg = (Get-Service *post*)[0]
PS C:\idea\power> $pg.DisplayName
postgresql-x64-9.1
PS C:\idea\power> $pg | Get-Member

TypeName: System.ServiceProcess.ServiceController

Name                MemberType          Definition
----                -
Name                AliasProperty      Name = ServiceName
RequiredServices    AliasProperty      RequiredServices = S...
Disposed            Event               System.EventHandler ...
```

E.g.: `Get-Command calc | Get-Member (Get-Command calc).Path`

Select-String



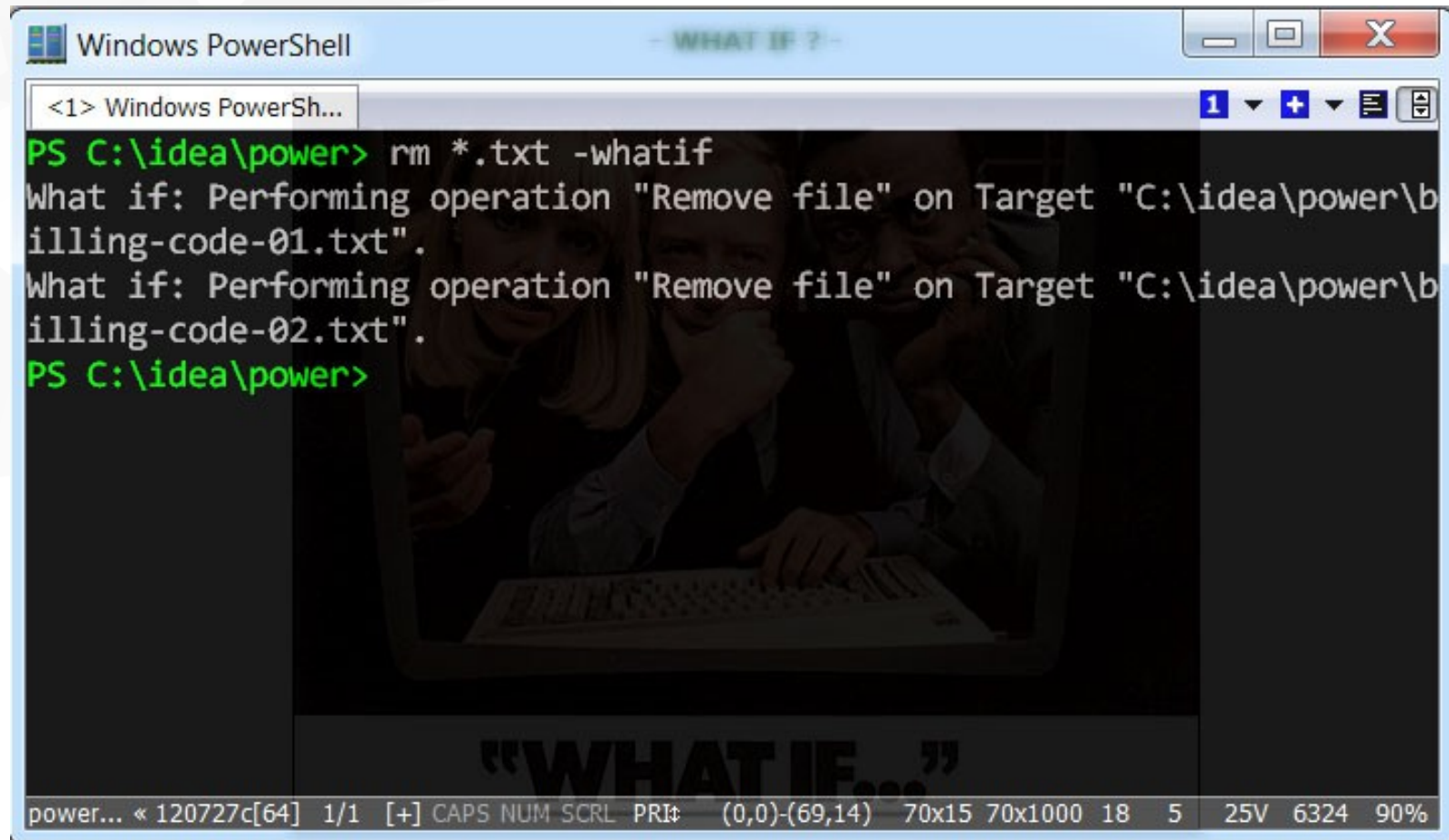
```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> sls -Pattern 11 *.txt
billing-code-01.txt:11:11 green billing code
billing-code-02.txt:1:11 Luftballon

PS C:\idea\power> Select-String -Pattern 10 *.txt
billing-code-01.txt:10:10 green billing code

PS C:\idea\power>
```

The screenshot shows a Windows PowerShell window with a dark background. The title bar reads "Windows PowerShell". The command prompt shows the user running the command `sls -Pattern 11 *.txt`, which returns two lines of output: `billing-code-01.txt:11:11 green billing code` and `billing-code-02.txt:1:11 Luftballon`. The user then runs `Select-String -Pattern 10 *.txt`, which returns `billing-code-01.txt:10:10 green billing code`. The prompt `PS C:\idea\power>` is shown again. The status bar at the bottom displays system information: `powers... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI (0,0)-(69,13) 70x14 70x1000 18 11 25V 6324 90%`.

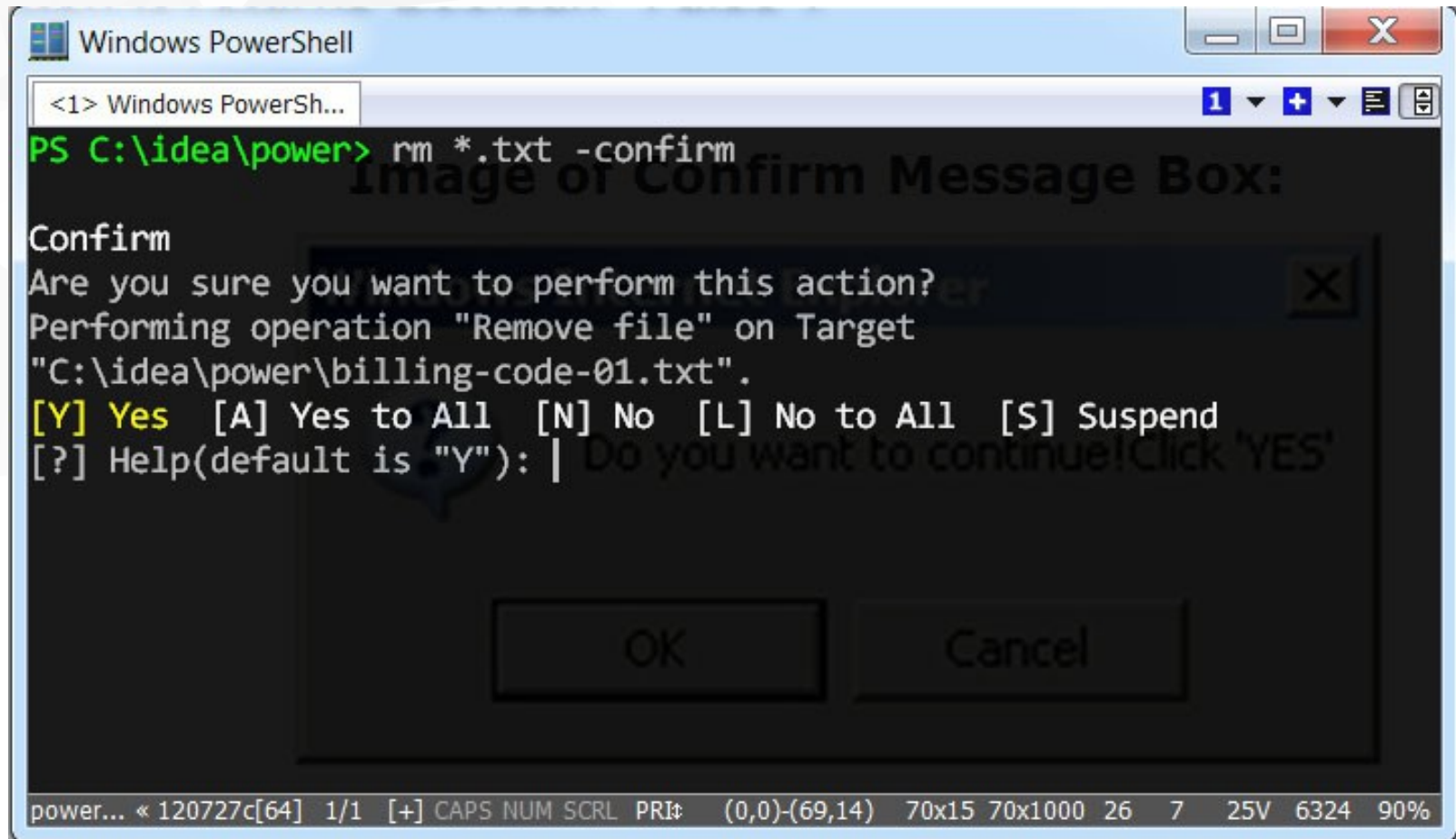
-whatif



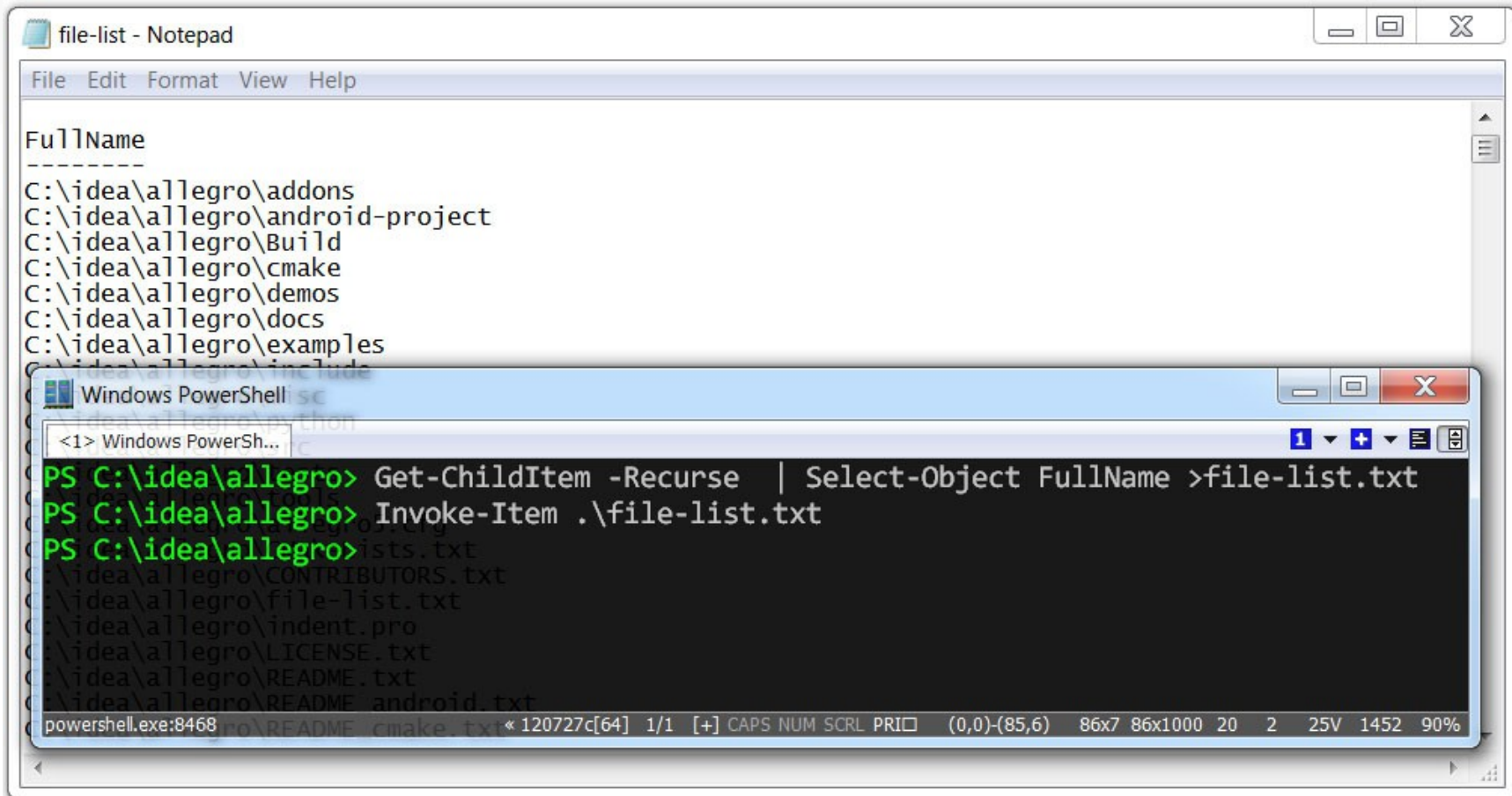
```
Windows PowerShell - WHAT IF ? -  
<1> Windows PowerSh...  
PS C:\idea\power> rm *.txt -whatif  
What if: Performing operation "Remove file" on Target "C:\idea\power\b  
illing-code-01.txt".  
What if: Performing operation "Remove file" on Target "C:\idea\power\b  
illing-code-02.txt".  
PS C:\idea\power>
```

power... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI (0,0)-(69,14) 70x15 70x1000 18 5 25V 6324 90%

-confirm



Get-ChildItem – find files



The image shows a Notepad window titled "file-list - Notepad" with a menu bar (File, Edit, Format, View, Help). The text inside lists several file paths under the heading "FullName":

```
FullName
-----
C:\idea\allegro\addons
C:\idea\allegro\android-project
C:\idea\allegro\Build
C:\idea\allegro\cmake
C:\idea\allegro\demos
C:\idea\allegro\docs
C:\idea\allegro\examples
C:\idea\allegro\include
C:\idea\allegro\LICENSE.txt
C:\idea\allegro\README.txt
C:\idea\allegro\README_android.txt
C:\idea\allegro\README_cmake.txt
```

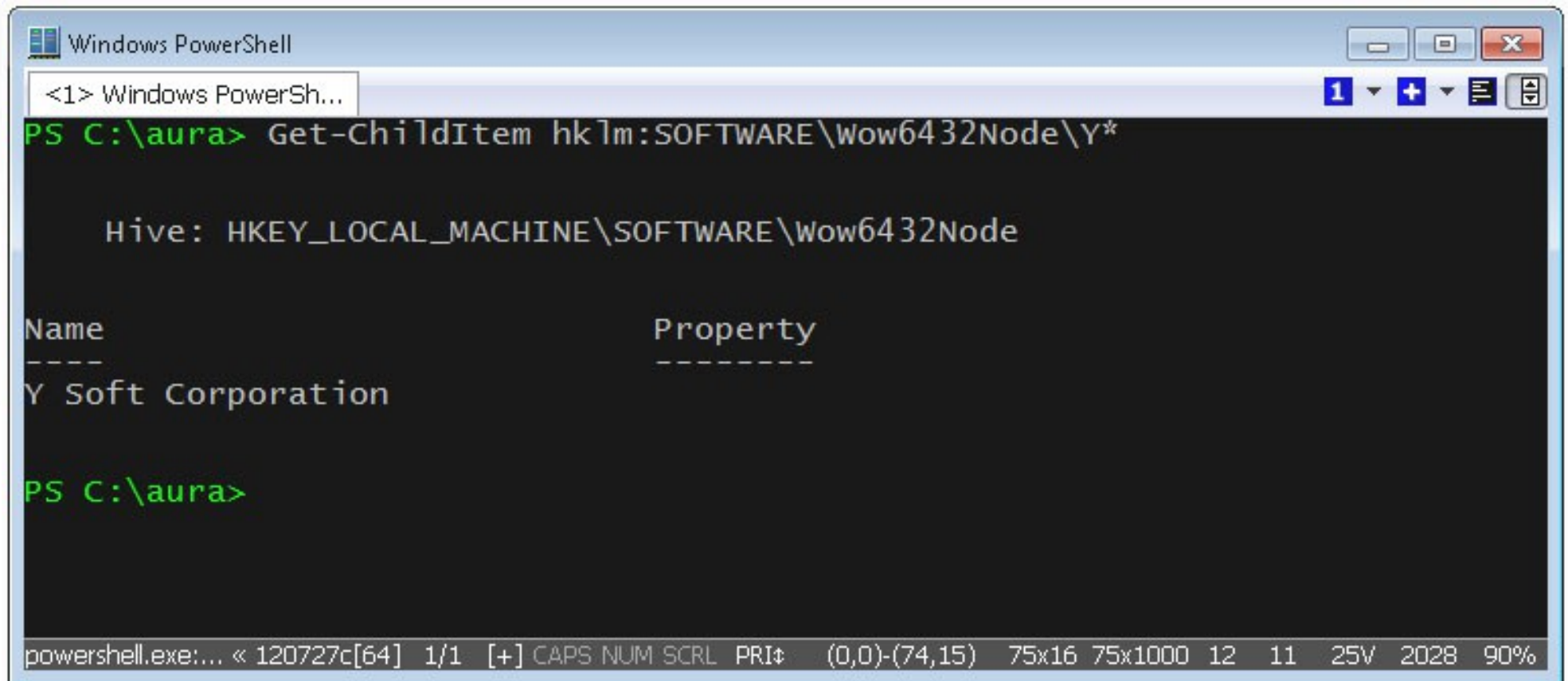
Overlaid on the Notepad window is a Windows PowerShell window. The command prompt shows the following commands and their output:

```
PS C:\idea\allegro> Get-ChildItem -Recurse | Select-Object FullName >file-list.txt
PS C:\idea\allegro> Invoke-Item .\file-list.txt
PS C:\idea\allegro>
```

The PowerShell window also shows a list of file paths, which matches the content of the Notepad window. The status bar at the bottom of the PowerShell window displays "powershell.exe:8468" and other system information.

In case of long file path: | Select-Object -ExpandProperty FullName >file-list.txt

Get-ChildItem registry



```
Windows PowerShell
<1> Windows PowerSh...
PS C:\aura> Get-ChildItem hklm:SOFTWARE\Wow6432Node\Y*

Hive: HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node

Name                Property
----                -
Y Soft Corporation

PS C:\aura>
```

powershell.exe:... << 120727c[64] 1/1 [+]
CAPS NUM SCRL PRI# (0,0)-(74,15) 75x16 75x1000 12 11 25V 2028 90%

Out-GridView

Get-Process | Out-GridView

Filter

+ Add criteria

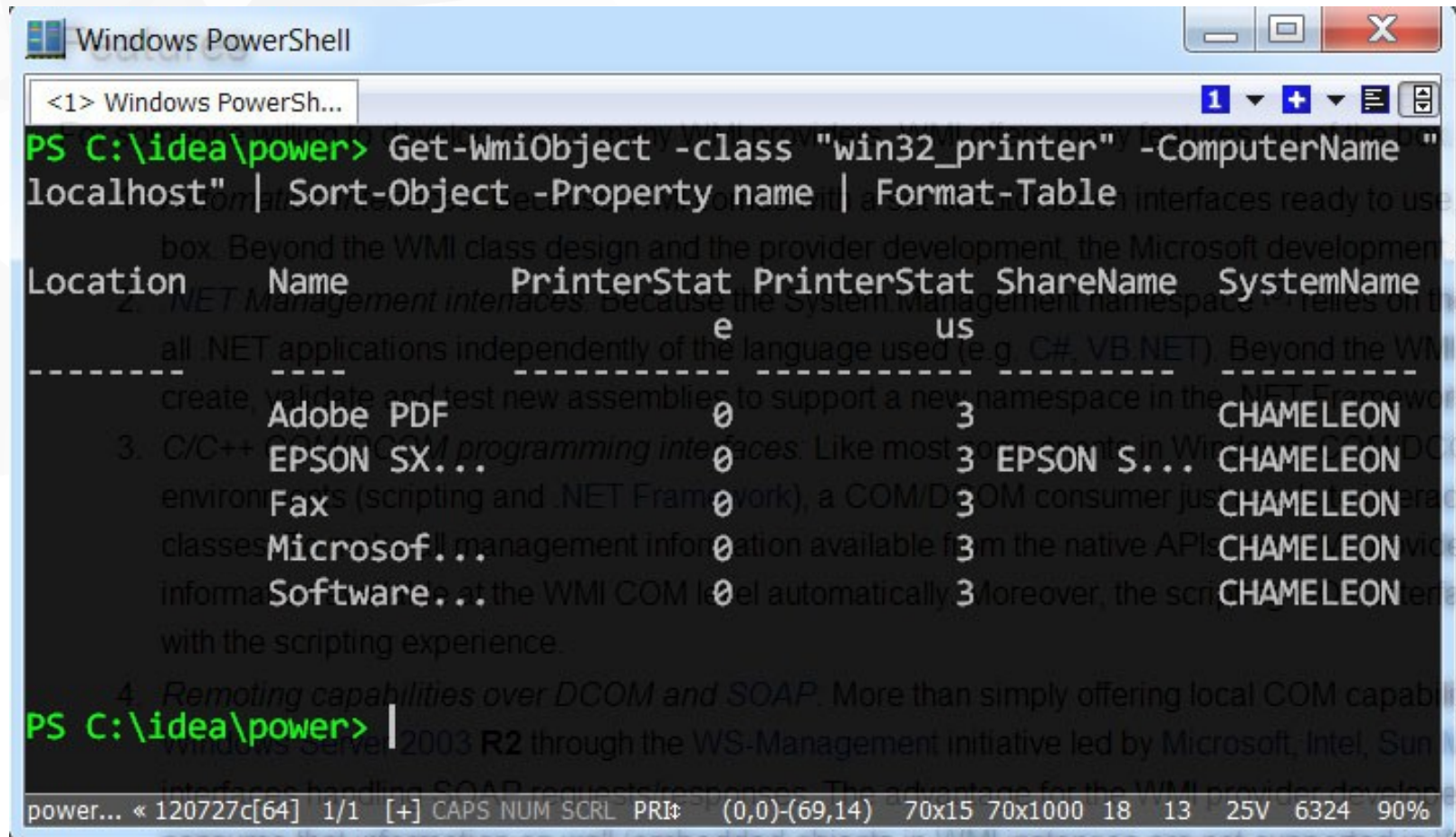
Handles	NPM(K)	PM(K)	WS(K)	VM(M)	CPU(s)	Id	ProcessName
62	8	2624	7088	73	1,05	4 368	notepad
104	10						
122	9						
164	13						
363	13						
1 171	224						
249	36						
480	39						
332	47						
368	58						
168	32						
241	37						
233	13						
52	7						
102	10						

Windows PowerShell

```
<1> Windows PowerSh...  
PS C:\idea\power> Get-Process | Out-GridView  
PS C:\idea\power> |
```

power... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI# (0,0)-(69,14) 70x15 70x1000 18 1 25V 6324 90%

Get-WmiObject



```
PS C:\idea\power> Get-WmiObject -class "win32_printer" -ComputerName "localhost" | Sort-Object -Property name | Format-Table
```

Location	Name	PrinterStat	PrinterStat	ShareName	SystemName
	Adobe PDF	0	3		CHAMELEON
	EPSON SX...	0	3	EPSON S...	CHAMELEON
	Fax	0	3		CHAMELEON
	Microsof!...	0	3		CHAMELEON
	Software. ...	0	3		CHAMELEON

```
PS C:\idea\power>
```

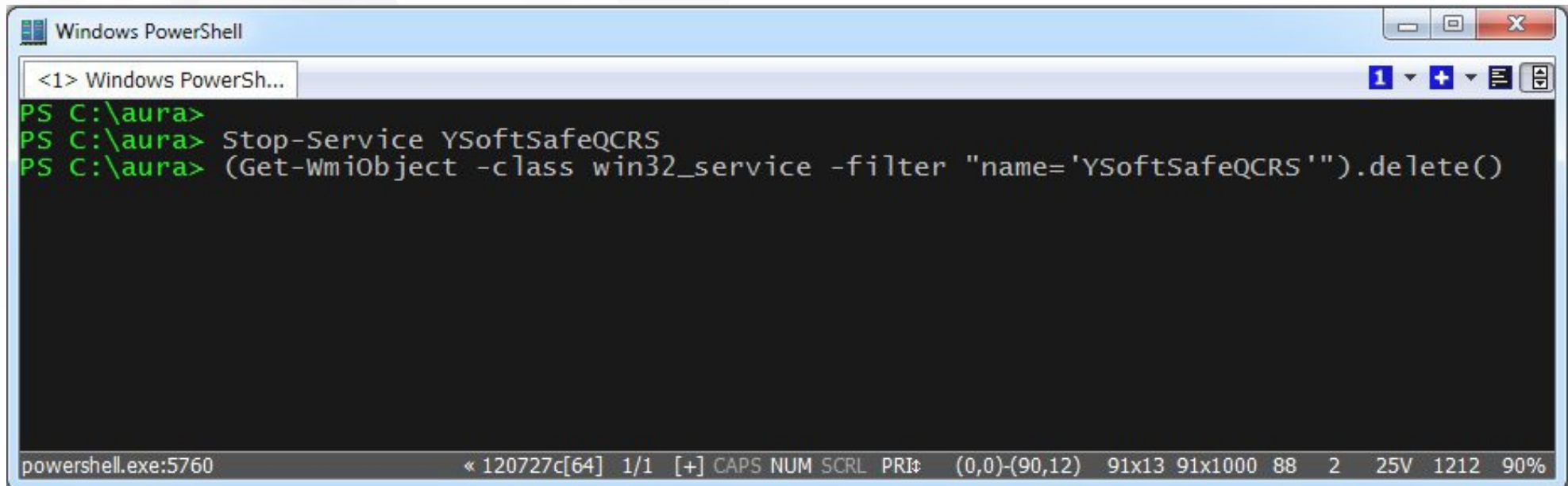
[http://msdn.microsoft.com/en-us/library/windows/desktop/aa394084\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/windows/desktop/aa394084(v=vs.85).aspx)


```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> (Get-WmiObject -class win32_bios).Version
LENOVO - 1510
PS C:\idea\power> Get-WmiObject -class win32_diskdrive

Partitions : 2
DeviceID    : \\.\PHYSICALDRIVE0
Model       : SAMSUNG SSD 830 Series
Size        : 256055869440
Caption     : SAMSUNG SSD 830 Series

PS C:\idea\power> (Get-WmiObject -class win32_diskdrive).Caption
SAMSUNG SSD 830 Series
PS C:\idea\power> |
power... < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI# (0,0)-(69,15) 70x16 70x1000 18 15 25V 6324 90%
```

Stop and delete service



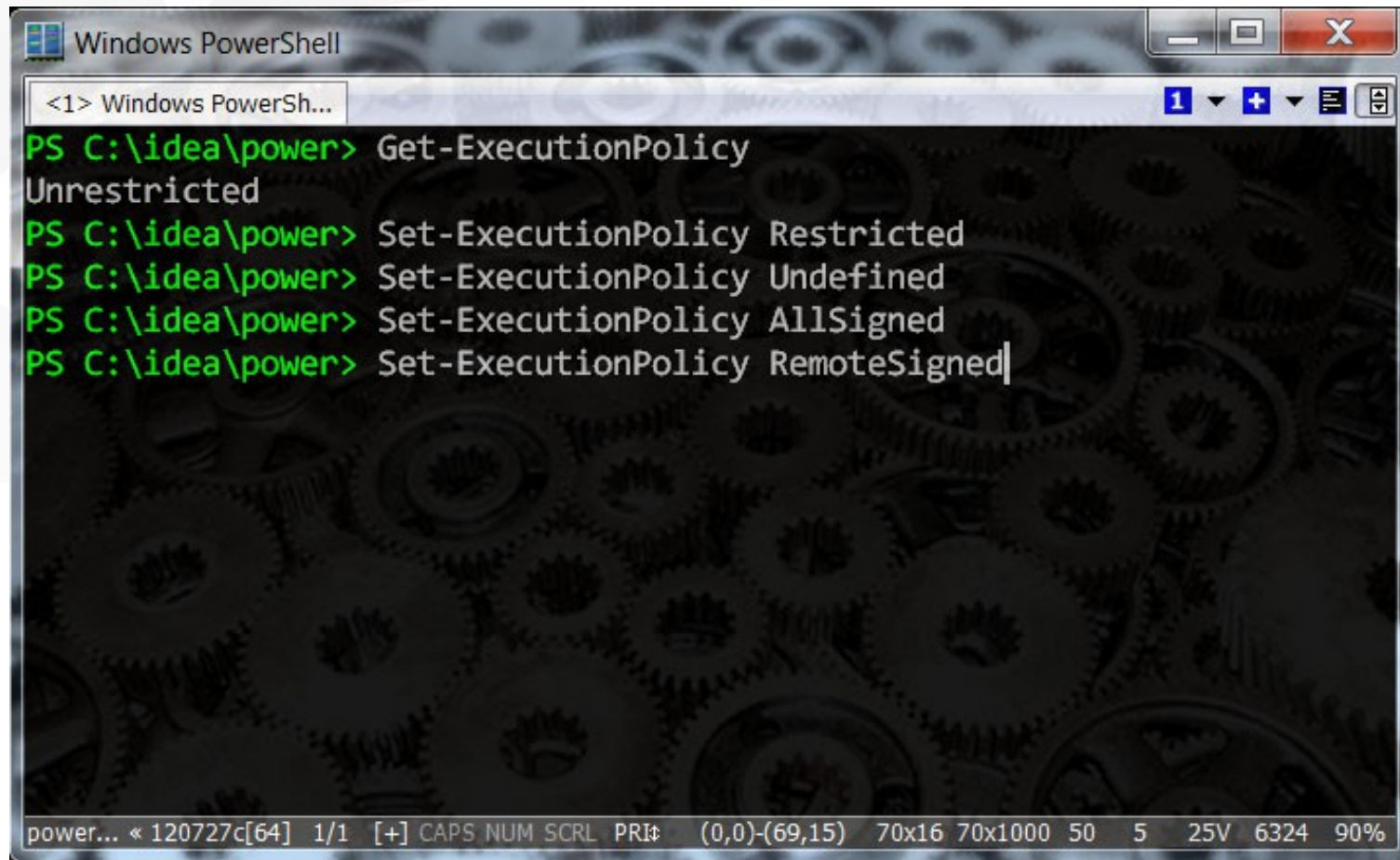
```
Windows PowerShell
<1> Windows PowerSh...
PS C:\aura>
PS C:\aura> Stop-Service YSoftSafeQCRS
PS C:\aura> (Get-WmiObject -class win32_service -filter "name='YSoftSafeQCRS']").delete()

powershell.exe:5760  < 120727c[64] 1/1 [+] CAPS NUM SCRL PRI: (0,0)-(90,12) 91x13 91x1000 88 2 25V 1212 90%
```

Start-up configuration

- ▼ ~\Documents\WindowsPowerShell\
- ▼ Microsoft.PowerShell_profile.ps1

Execution policy

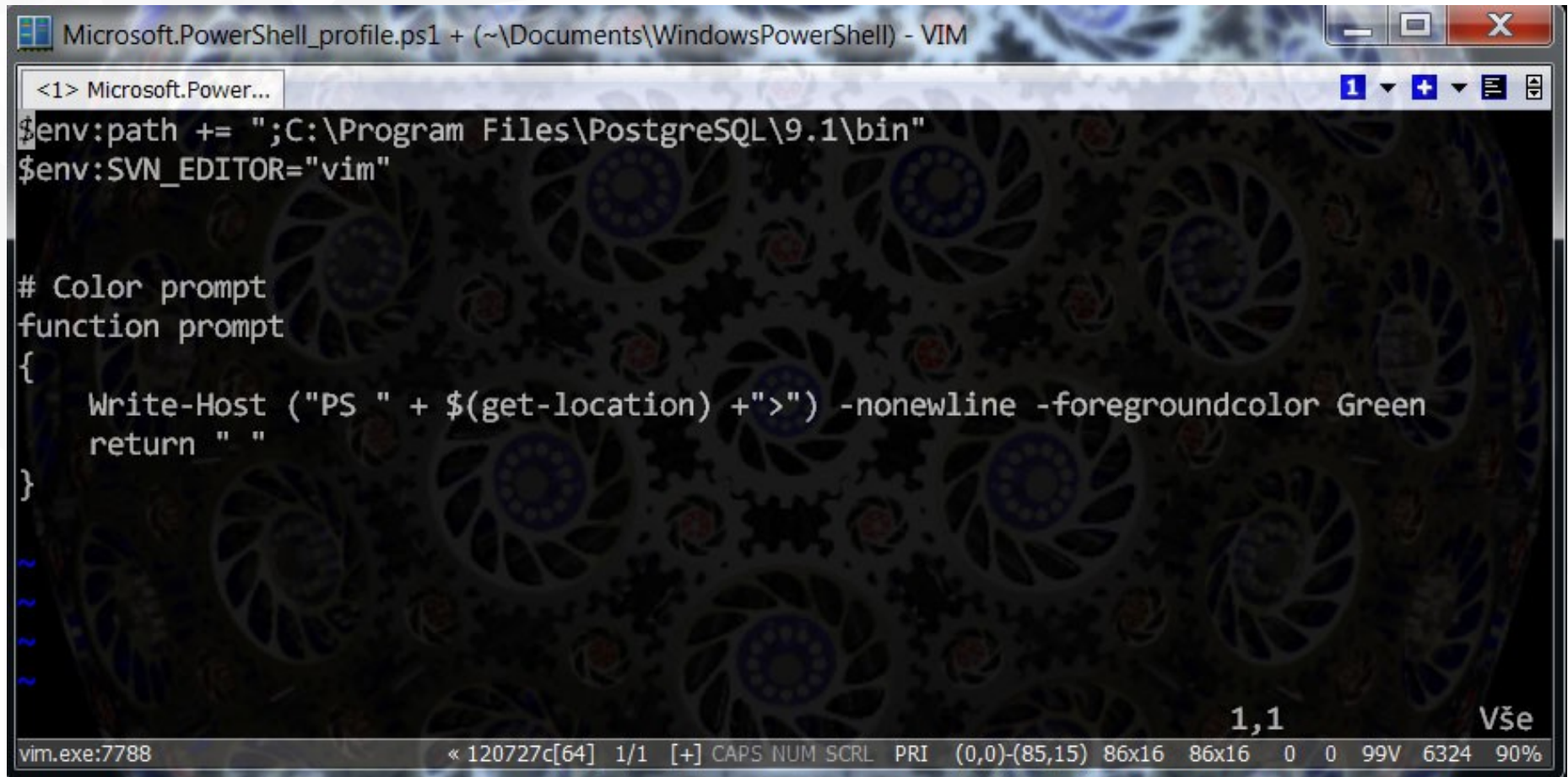


The image shows a Windows PowerShell terminal window with a dark background and green text. The window title is "Windows PowerShell". The command prompt shows the current directory as "C:\idea\power". The user has entered four commands to check and set the execution policy. The first command returns "Unrestricted". The subsequent three commands are being entered but have not yet been executed, as indicated by the cursor at the end of the last line.

```
Windows PowerShell
<1> Windows PowerSh...
PS C:\idea\power> Get-ExecutionPolicy
Unrestricted
PS C:\idea\power> Set-ExecutionPolicy Restricted
PS C:\idea\power> Set-ExecutionPolicy Undefined
PS C:\idea\power> Set-ExecutionPolicy AllSigned
PS C:\idea\power> Set-ExecutionPolicy RemoteSigned|
```

power... « 120727c[64] 1/1 [+] CAPS NUM SCRL PRI# (0,0)-(69,15) 70x16 70x1000 50 5 25V 6324 90%

Sample profile



The image shows a screenshot of a Windows PowerShell window titled "Microsoft.PowerShell_profile.ps1 + (~\Documents\WindowsPowerShell) - VIM". The window is running the VIM editor, which is displaying a PowerShell profile script. The script contains the following code:

```
<1> Microsoft.Power...
$env:path += ";C:\Program Files\PostgreSQL\9.1\bin"
$env:SVN_EDITOR="vim"

# Color prompt
function prompt
{
    Write-Host ("PS " + $(get-location) + ">") -nonewline -foregroundcolor Green
    return " "
}

~
~
~

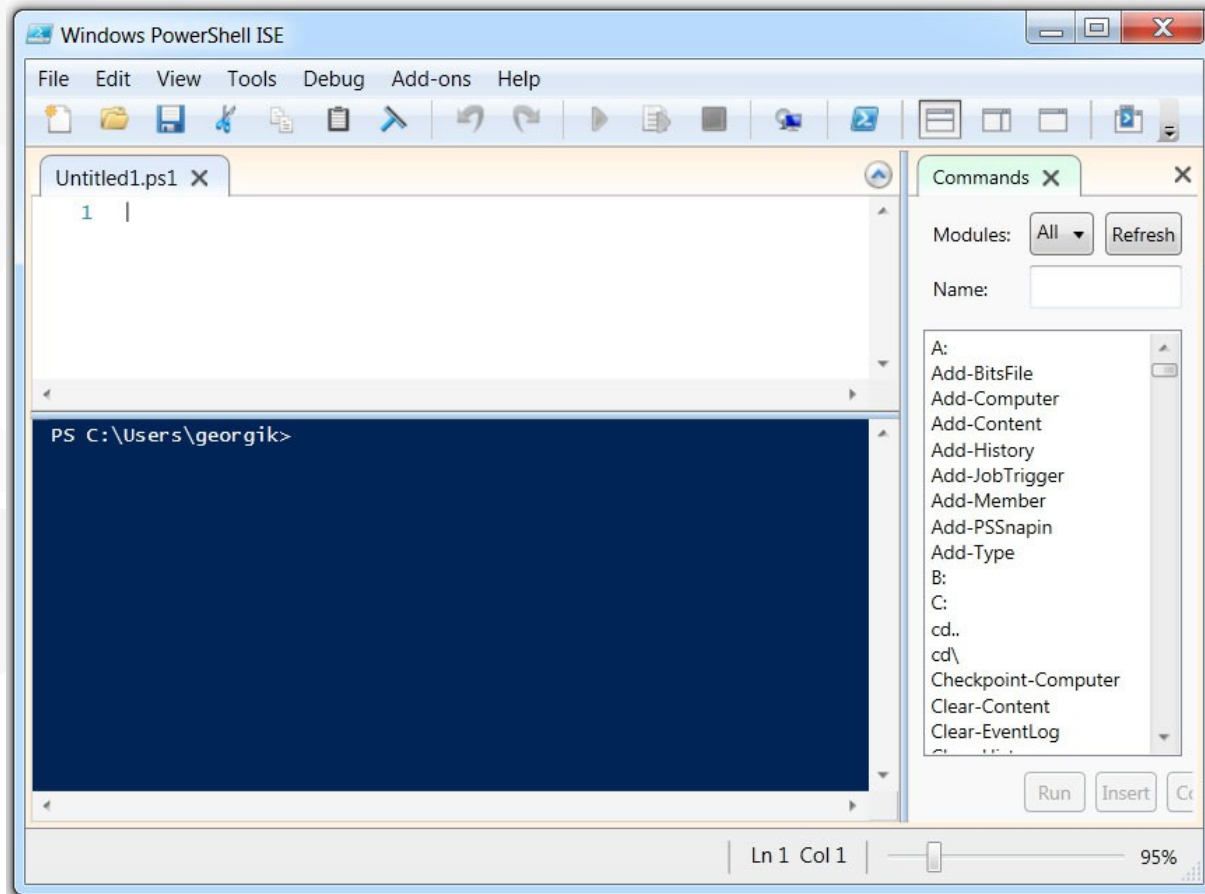
1,1 Vše
vim.exe:7788 << 120727c[64] 1/1 [+] CAPS NUM SCRL PRI (0,0)-(85,15) 86x16 86x16 0 0 99V 6324 90%
```

The script sets the environment variable `$env:path` to include the PostgreSQL 9.1 bin directory and sets `$env:SVN_EDITOR` to `vim`. It also defines a `prompt` function that displays a green prompt `PS` followed by the current location and a space. The VIM status bar at the bottom shows the current cursor position at line 1, column 1 and other system information.

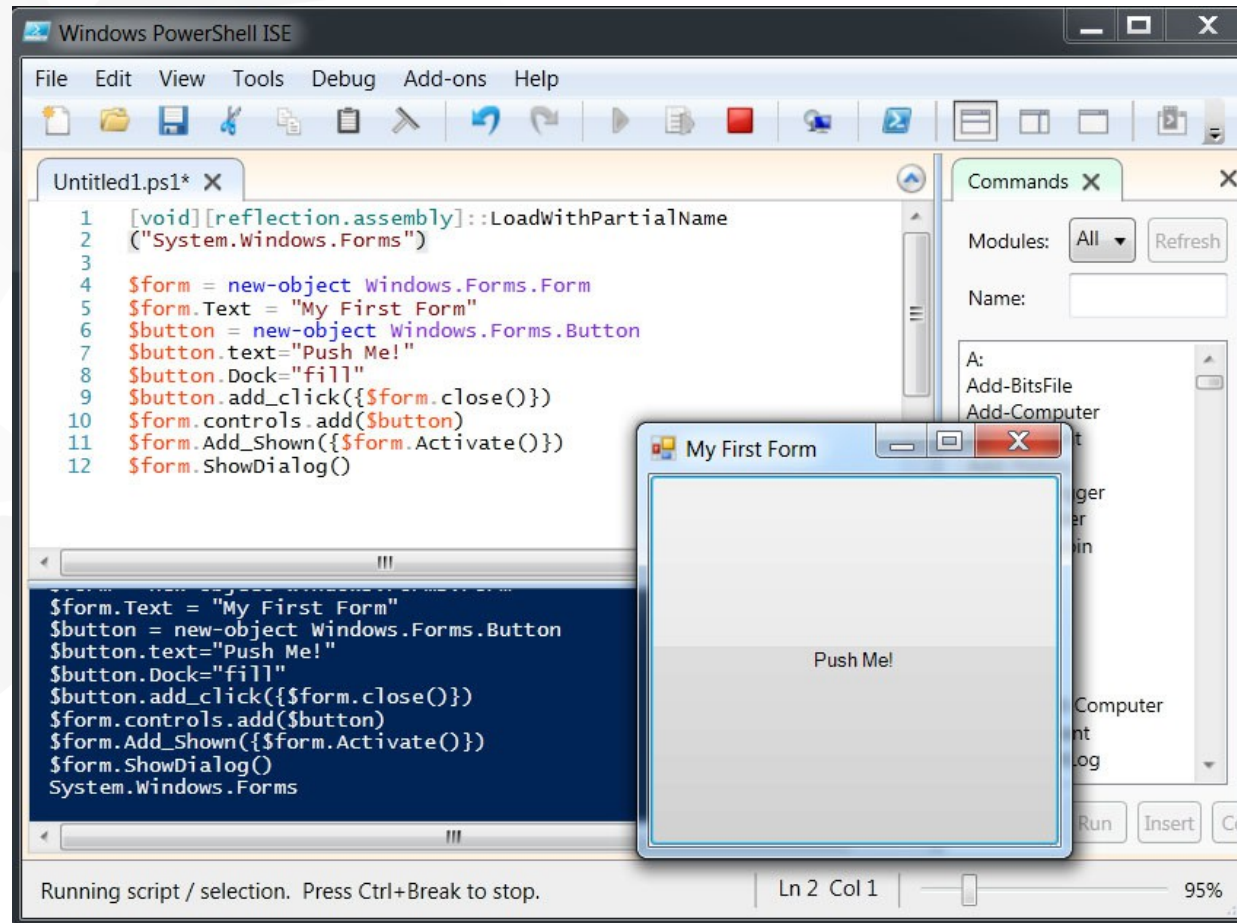
PowerShell Integrated Script Environment



PowerShell 3 ISE

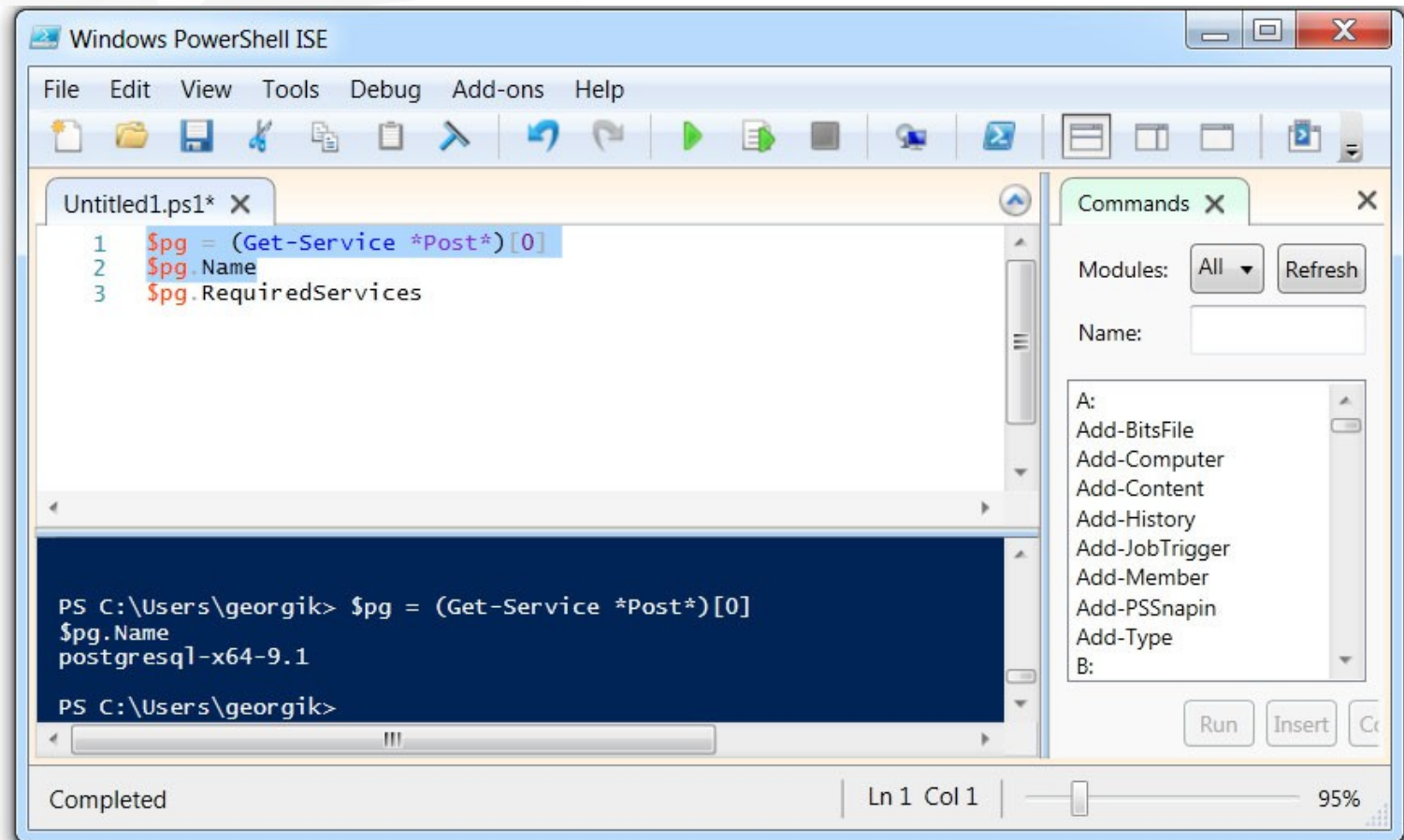


ISE + .Net



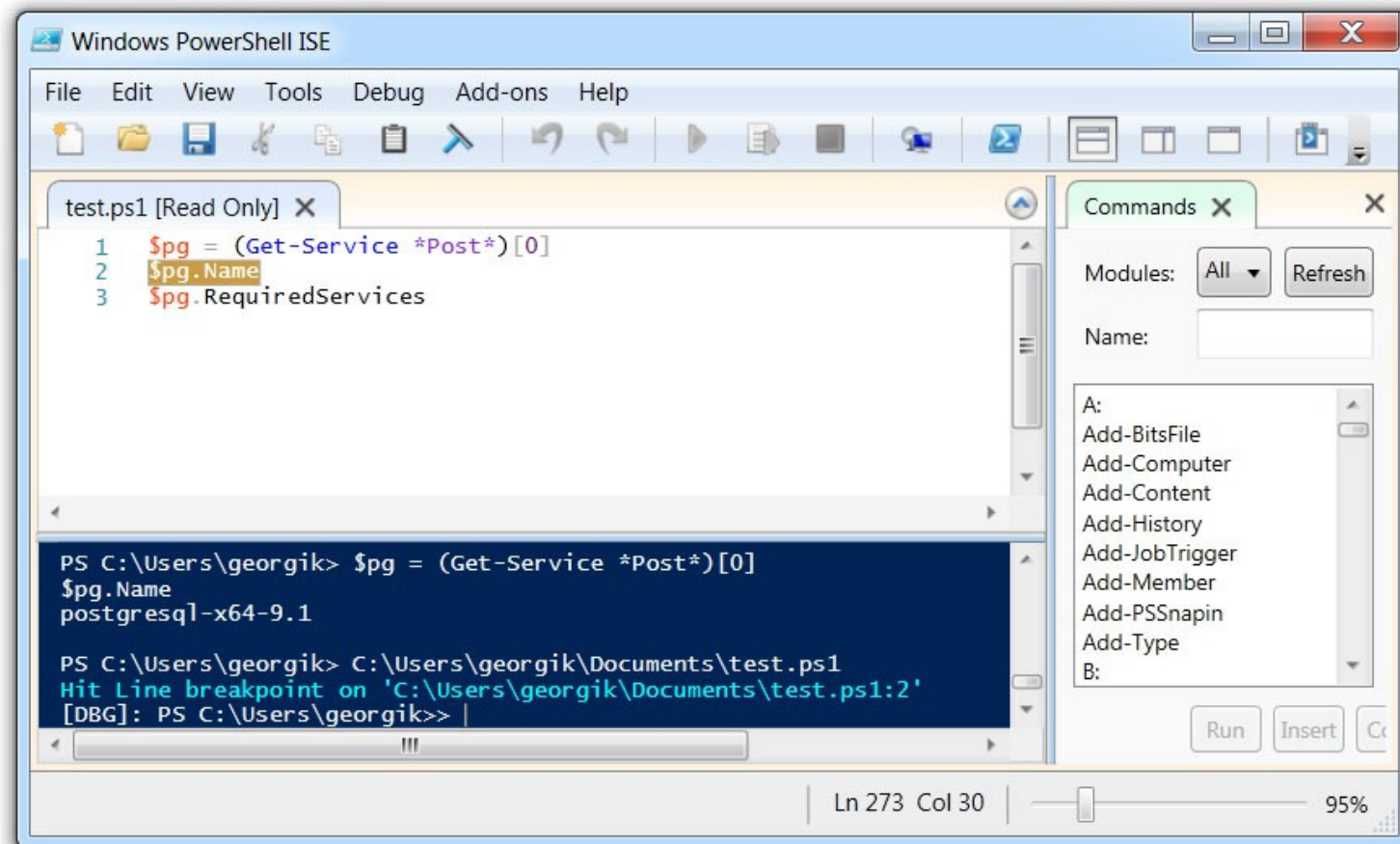
F5 – Run script

Run Selection



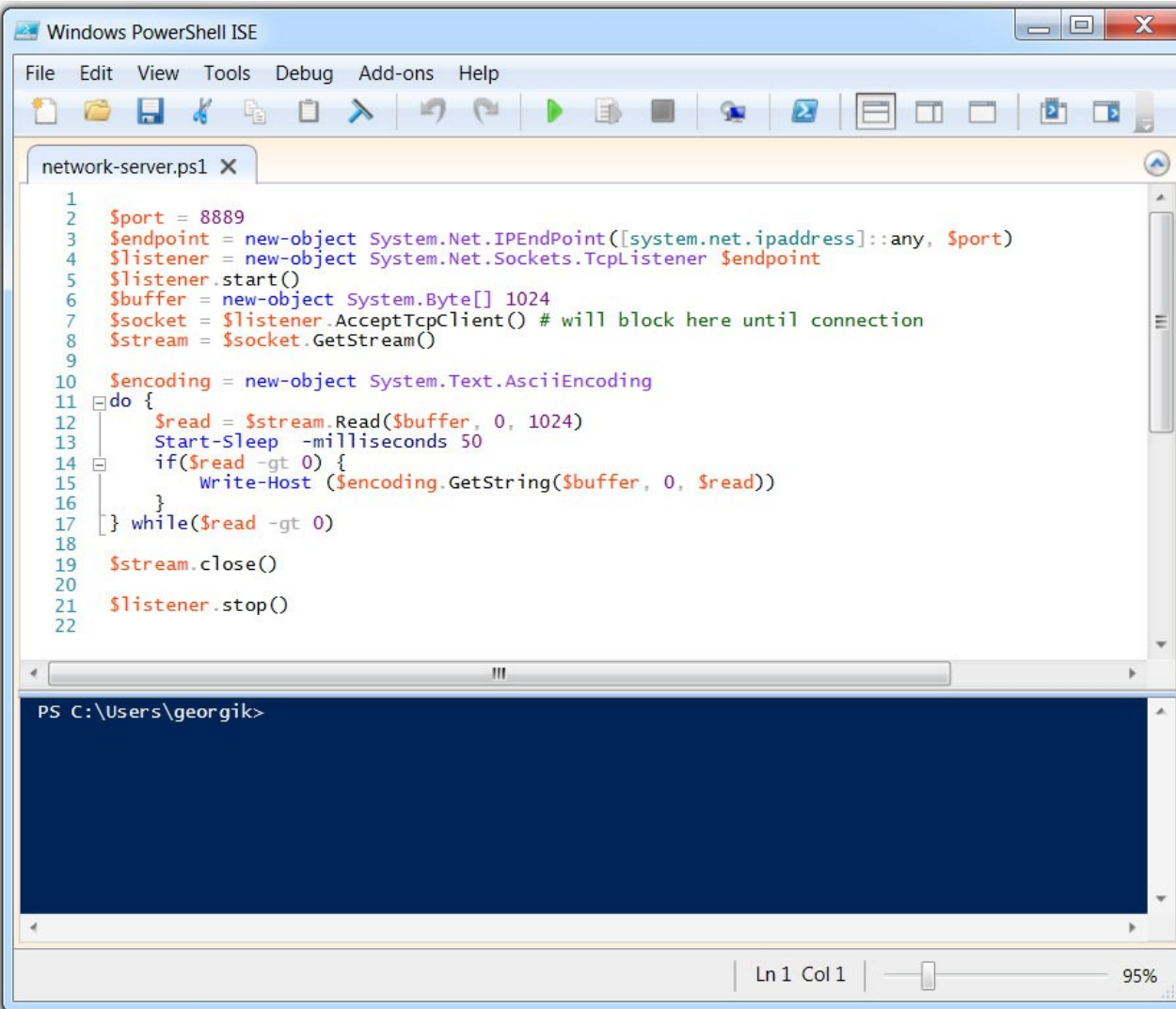
F8 – Run selection

Debugging



F9 – Toggle break point

Direct printer simulator

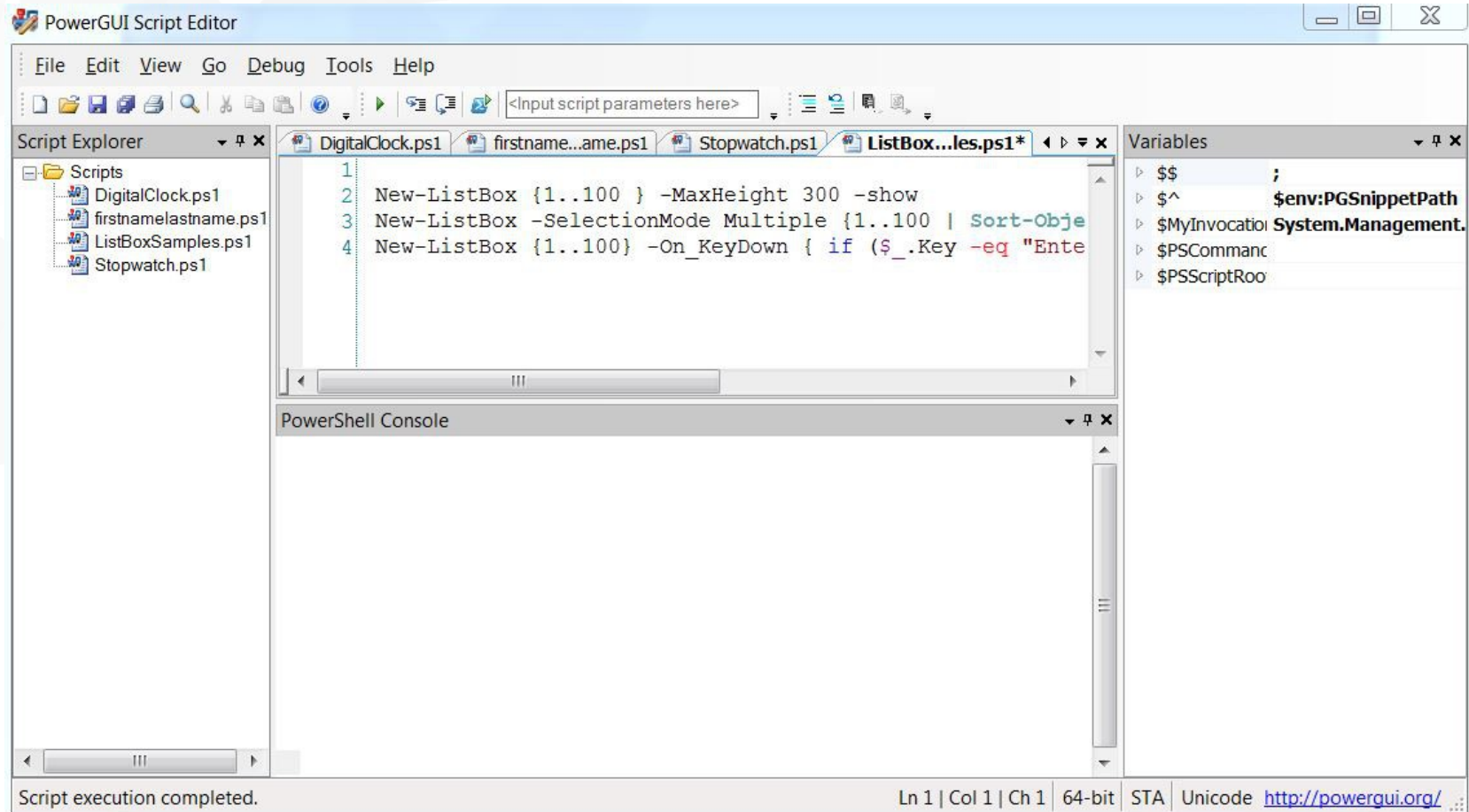


The image shows a screenshot of the Windows PowerShell ISE (Integrated Scripting Environment) window. The window title is "Windows PowerShell ISE". The menu bar includes "File", "Edit", "View", "Tools", "Debug", "Add-ons", and "Help". The toolbar contains various icons for file operations, editing, and execution. The main editor area shows a script named "network-server.ps1" with the following code:

```
1
2 $port = 8889
3 $endpoint = new-object System.Net.IPEndPoint([system.net.ipaddress]::any, $port)
4 $listener = new-object System.Net.Sockets.TcpListener $endpoint
5 $listener.start()
6 $buffer = new-object System.Byte[] 1024
7 $socket = $listener.AcceptTcpClient() # will block here until connection
8 $stream = $socket.GetStream()
9
10 $encoding = new-object System.Text.AsciiEncoding
11 do {
12     $read = $stream.Read($buffer, 0, 1024)
13     Start-Sleep -milliseconds 50
14     if($read -gt 0) {
15         Write-Host ($encoding.GetString($buffer, 0, $read))
16     }
17 } while($read -gt 0)
18
19 $stream.close()
20
21 $listener.stop()
22
```

The console area at the bottom shows the prompt "PS C:\Users\georgik>" and is currently empty. The status bar at the bottom right indicates "Ln 1 Col 1" and "95%".

PowerGUI



<http://www.powergui.org>

Examples @github



▼ <https://github.com/georgik/powershell-examples>

Resources

▼ PowerShell 3

- ▼ <http://social.technet.microsoft.com/wiki/contents/articles/4725.powershell-v3-guide-en-us.aspx>

▼ PowerShell tips

- ▼ <http://technet.microsoft.com/en-us/library/hh848797.aspx>

▼ Cheat Sheet

- ▼ <http://www.cheat-sheets.org/#WindowsPowerShell>

▼ PowerShell Books

- ▼ <http://powershellbooks.com/>

▼ Wiki

- ▼ <http://wiki.ysoft.local/display/RnD> - How To PowerShell



KEEP
CALM
AND
LEARN
POWERSHELL

- ▼ Juraj Michálek
- ▼ 2. 10. 2013