CSI3670
A Bit More on PowerShell

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More PowerShell

PLAN OF ACTION

- Couple of 'minor' points about PowerShell
- Small amount of labwork
- More term project time!

Tuesday:

- In-class work (bring your laptops)
    - Won't be graded, but worthwhile

Functions vs. *Advanced* Functions

```
Function Do-Something {
  Param($item)
  Write-Host "You passed in $item"
}

Do-Something -item "aaa"
```

```
Function Do-Something {
  [CmdletBinding()]
  Param($item)
  Write-Host "You passed in $item"
}
```

https://devblogs.microsoft.com/scripting/introduction-to-advanced-powershell-functions/

Advanced Functions

Not necessarily a cmdlet, but takes advantage of their features

Such as:

- Verbosity
- Pipeline (object transfer)
- WhatIf
- ...much more

Verbosity

Verbosity: the act of making things verbose
        (-v in the Linux world)

```
Function Do-Something {
  [CmdletBinding()]
  Param($item)
  Write-Verbose "You passed in $item"
}

PS> Do-Something -Verbose -item "the item"
PS> Do-Something "item"
```

Pipeline(ity)

Participate in the ability to deal with **objects**

```
Function Do-Something {
  [CmdletBinding()]
  Param(
    [Parameter(ValueFromPipelineByPropertyName)]
    $Name
  )
  process {
    Write-Host "You passed $Name in!"
  }
}
Get-Service | Do-Something
```

WOT IF

```
Function Remove-Something {
  [CmdletBinding(SupportsShouldProcess)]
  Param(
    [Parameter(ValueFromPipelineByPropertyName)]
    $File
  )
  if ($PSCmdlet.ShouldProcess($File)) {
    Remove-Item –Path $File –Confirm:$false
  }
}
touch temp
Remove-Something temp -WhatIf
```

Reporting

Samsung GALAXY Tab S
12:45
Thu, 12 June
London
10°C
69%
14%
10%
8%
55%
Map chart
SAMSUNG

ConvertTo-*

PowerShell can transform output into HTML, XML, JSON, etc.

Let's make a super special report into something that a manager can understand

```
Get-PSDrive
Get-PSDrive | ConvertTo-Html
Get-PSDrive | ConvertTo-Html | Out-File -FilePath drives.html
```

Prettify

```
Get-PSDrive | ConvertTo-Html -Property
Name,Used,Provider,Root,CurrentLocation | Out-File -FilePath
PSDrives.html
…
```

Stylify

```
$Header = @"
<style>
TABLE {border-width: 1px; border-style: solid; border-color:
black; border-collapse: collapse;}
TD {border-width: 1px; padding: 3px; border-style: solid;
border-color: black;}
</style>
"@
```

```
Get-PSDrive | ConvertTo-Html -Property
Name,Used,Provider,Root,CurrentLocation -Head $Header | Out-File
-FilePath PSDrives.html
```

```
$Header = @"
<style>
TABLE {border-width: 1px; border-style: solid; border-color:
black; border-collapse: collapse;}
TH {border-width: 1px; padding: 3px; border-style: solid;
border-color: black; background-color: #6495ED;}
TD {border-width: 1px; padding: 3px; border-style: solid;
border-color: black;}
</style>
"@
```

GUI

```
Install-Module -Name ShowUI
…
Import-Module ShowUI
Label "Hi There" -FontSize 42 -Show
```

https://learn-powershell.net/2011/02/11/using-powershell-to-query-web-site-information/
(Sitewide Twitter RSS feed functionality now disabled)

```
Add-Type -AssemblyName System.Windows.Forms
$form = New-Object Windows.Forms.Form
$form.Size = New-Object Drawing.Size @(200,100)
$form.StartPosition = "CenterScreen"
$btn = New-Object System.Windows.Forms.Button
$btn.add_click({Get-Date|Out-Host})
$btn.Text = "Click here"
$form.Controls.Add($btn)
$drc = $form.ShowDialog()
```

Your "short" lab then…

…

Work on your term projects!

I will come by each team and I'd like a verbal report of:

1) What you have remaining
2) Who is doing what for the presentation