Piping and Formatting

* Output of one command becomes input for the next
* Referred to as a command pipeline
* Examples
  + command-1 | command-2 | command-3
  + Get-Service | Sort-Object -property status
* Creates a new variable called $\_
* $\_ represents the results of the previous command
* Can be used to run one command multiple times
  + Needed when command-1 generates multiple results but command-2 only accepts one result at a time
  + For example, Get-Process outputs multiple results and you want to pull details about each
    - Get-Process | Write-Host $\_.name
      * Fails when executed because Write-Host expects one value
    - Get-Process | ForEach-Object { Write-Host $\_.name }
      * Executes successfully
* Format cmdlets
  + Each format cmdlet has default properties
    - Get-Service to show default formatting
  + -Property to specify which properties to display
  + Format-Wide
    - Only shows a single property
    - Get-Service | Format-Wide
    - Get-Service | Format-Wide -Property DisplayName
    - Get-Service | Format-Wide -Column 1
  + Format-List
    - Accept list of properties
    - Get-Service | Format-List
    - Get-Service | Format-List -Property \*
    - Get-Service | Format-List -Property DisplayName, StartType
  + Format-Table
    - Accept list of properties
    - Get-Service | Format-Table
    - Get-Service | Format-Table -Property \*
    - Get-Service | Format-Table -Property DisplayName, StartType, Status
    - Autosize and wrap
      * Autosize
        + Calculate column widths based on the actual data
        + Assumes that the nearer a property is to the  
          beginning of the property list, the more important  
          it is
      * Wrap
        + Data will wrap within its display column
      * Results vary, experiment
      * Specify the smallest data first
    - Grouping and sorting output
      * Get-Service | Format-Table -Property DisplayName, StartType, Status -GroupBy StartType
      * Get-Service | Sort-Object -Property StartType | Format-Table -Property DisplayName, StartType, Status -GroupBy StartType
      * Get-Service | Sort-Object -Property StartType, DisplayName | Format-Table -Property DisplayName, StartType, Status -GroupBy StartType