LESSON 2

script.ps1

```
Get-Process |
  Where CPU -gt 100 |
  Sort CPU -Desc
```

PS>

The Pipeline

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POWERSHELL SCRIPTING

LESSON 2

The Object Pipeline

Get-Member, Select-Object, Where-Object, Sort-Object and Format-Table

Get-Member: What Is in an Object?

terminal

```
PS> Get-Process | Get-Member
   TypeName: System.Diagnostics.Process
Name        MemberType  Definition
----        ----------  ----------
Kill        Method      void Kill()
CPU         Property    double CPU {get;}
Id          Property    int Id {get;}
WorkingSet  Property    long WorkingSet {get;}
```

- Pipe any command into Get-Member to see the object type and all its properties and methods.
- This is the most important habit in PowerShell: when you are not sure what you can ask for, ...

01

Select-Object

select.ps1

```
Get-Process | Select-Object Name, Id, CPU -First 5

Get-Process | Select-Object Name,
    @{ Name = 'MemoryMB'; Expression = { [math]::Round($_.WorkingSet / 1MB, 1) } }
```

- Select-Object picks the properties you want, and dash First or dash Last picks a number of …
- You can even add calculated properties, like memory in megabytes instead of bytes.

02

Where-Object

where.ps1

```
Get-Process | Where-Object { $_.CPU -gt 100 }
Get-Service | Where-Object Status -eq 'Running'
Get-ChildItem | Where-Object { $_.Length -gt 10MB }
Get-ChildItem *.log | Where-Object Name -like 'app*'
```

- Where-Object filters objects with a condition. Dollar underscore, or dollar PSItem, is the …
- Comparison operators are words with a dash: dash gt for greater than, dash eq for equals, …

03

Sort, Group and Measure

top.ps1

```
Get-Process | Sort-Object WorkingSet -Descending | Select-Object -First 10 Name, WorkingSet

Get-Service | Group-Object Status

Get-ChildItem -Recurse -File | Measure-Object Length -Sum -Average
```

- Sort-Object orders objects by a property, Group-Object groups them, and Measure-Object …
- Together they answer real questions, like which ten processes use the most memory.

04

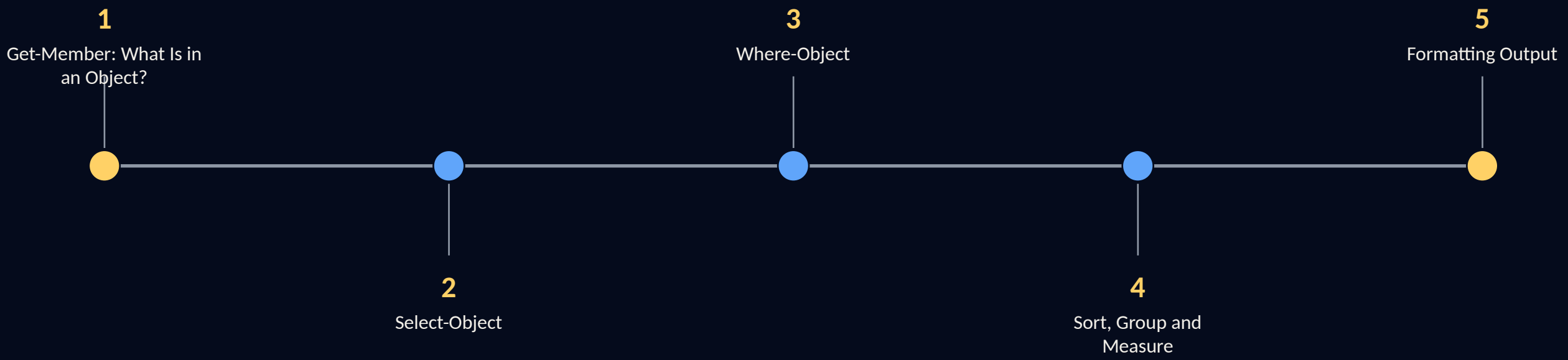
Formatting Output



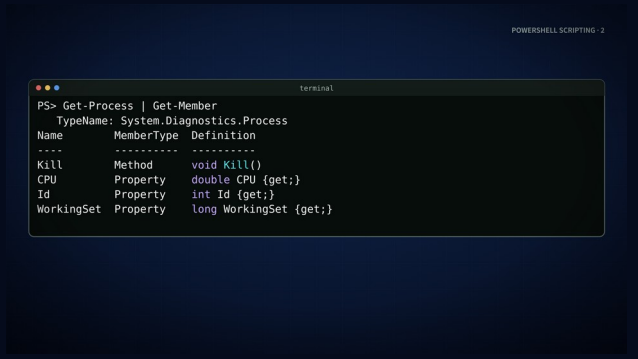
- Format-Table and Format-List control how objects look on screen. Dash AutoSize makes tables …
- Important: format at the very end of the pipeline only. After Format-Table, you have …

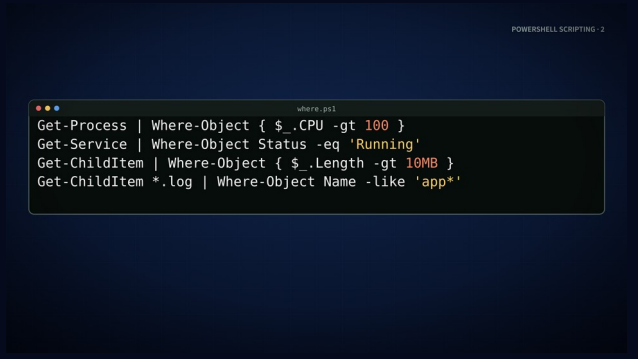
05

Lesson Map


1
Get-Member: What Is in an Object?
2
Select-Object
3
Where-Object
4
Sort, Group and Measure
5
Formatting Output

Sources and Further Reading





Thank you for watching

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