**🗓️ Day 1 – PowerShell Fundamentals & Core Concepts**

**1️⃣ Introduction to PowerShell**

* What is PowerShell and why use it?
* PowerShell vs Command Prompt
* Versions: Windows PowerShell vs PowerShell 7
* Opening PowerShell (Console, ISE, VS Code)

**2️⃣ Getting Help & Exploring Commands**

* Get-Help usage (-Examples, -Online)
* Get-Command to discover cmdlets
* Understanding Verb-Noun naming convention
* Using Get-Member to inspect objects

*Exercise:* Explore help for Get-Service and run examples.

**3️⃣ Navigating the File System**

* Directories: Get-Location, Set-Location
* Listing items: Get-ChildItem (ls, dir)
* Creating/removing items: New-Item, Remove-Item
* Copying/moving/renaming files

*Exercise:* Create a folder, add files, move and delete them.

**4️⃣ Pipelines & Objects**

* PowerShell pipeline basics (|)
* Filtering: Where-Object
* Sorting: Sort-Object
* Selecting properties: Select-Object
* Exporting data: Export-Csv, Out-File

*Exercise:* List running processes, sort by CPU usage, export to CSV.

**5️⃣ Variables & Data Types**

* Declaring variables: $var = "value"
* Strings, Integers, Arrays, HashTables
* Automatic variables: $PSVersionTable, $?, $Error

*Exercise:* Store file paths in a variable and loop through them.

**✅ Day 1 Wrap-Up Exercise**

Write a script that:

1. Creates a folder Logs
2. Gets all running services
3. Saves the output to a services.csv file in Logs

**🗓️ Day 2 – Scripting, Logic & System Management**

**1️⃣ Operators & Conditional Logic**

* Comparison operators: -eq, -ne, -gt, -lt
* Logical operators: -and, -or, -not
* If/Else statements

*Exercise:* Write a script that checks if a file exists and prints a message.

**2️⃣ Loops**

* for, foreach, while, do loops
* Using foreach-object in pipelines

*Exercise:* Loop through a list of services and check their status.

**3️⃣ Functions & Scripts**

* Writing reusable functions
* Saving scripts as .ps1 files
* Running scripts (Execution Policy basics)
* Using parameters in scripts

*Exercise:* Write a function to restart a given service.

**4️⃣ Managing Processes & Services**

* Get-Process, Stop-Process
* Get-Service, Start-Service, Stop-Service, Set-Service
* Checking system info: Get-ComputerInfo

*Exercise:* Create a script that restarts the **Print Spooler** service if it’s stopped.

**5️⃣ Intro to Remote Management**

* Basics of Enter-PSSession, Invoke-Command
* Running commands on a remote computer (conceptual demo if no lab setup)

**6️⃣ Error Handling & Output**

* Try / Catch basics
* Write-Output, Write-Host, Write-Error
* Logging script results

*Exercise:* Write a script that tries to stop a service and catches the error if it fails.

**✅ Day 2 Wrap-Up Project**

Create a script that:

1. Accepts a list of service names from a text file
2. Loops through each service
3. Checks if it’s running
4. Restarts it if stopped
5. Logs results to a CSV