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ASSIGMENT 1

Commands I've used to create a sample tree

Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux"

```
Use New-Item -ItemType Directory -Force to create nested directories
New-Item -ItemType Directory -Path "home\mugisha\Practice\P1" -Force
New-Item -ItemType Directory -Path "home\mugisha\Practice\P2" -Force
New-Item -ItemType Directory -Path "home\mugisha\Practice\P3" -Force
New-Item -ItemType Directory -Path "home\mugisha\Command" -Force
New-Item -ItemType Directory -Path "home\mugisha\tmp" -Force
New-Item -ItemType Directory -Path "home\mugisha\Else" -Force

Create file with content
" P3 file content" | Out-File -FilePath "home\mugisha\Practice\P3\P3" -Encoding utf8
"Here directory file" | Out-File -FilePath "home\mugisha\Command\Here_file" -Encoding utf8
"hereWeAre file" | Out-File -FilePath "home\mugisha\Practice\P3\hereWeAre" -Encoding utf8

# List contents (long listing)
Get-ChildItem -Path "home\mugisha\Command\Here" | Format-List

# Copy a single file (from P3 to Command)
Copy-Item -Path "home\mugisha\Practice\P3\P3" -Destination "home\mugisha\Command\"

# Copy all files from P3 to Command
Copy-Item -Path "home\mugisha\Practice\P3\*" -Destination "home\mugisha\Command\"

SCREENSHOTS
```

```
>> New-Item -ItemType Directory -Path "home\mugisha\Practice\P3" -Force
>> New-Item -ItemType Directory -Path "home\mugisha\Command" -Force
>> New-Item -ItemType Directory -Path "home\mugisha\tmp" -Force
>> New-Item -ItemType Directory -Path "home\mugisha\Else" -Force
>> New-Item -ItemType Directory -Path "home\mugisha\Command\Here" -Force


    Directory: C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice

Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         9/24/2025  10:12 AM                P1
d-----         9/24/2025  10:12 AM                P2
d-----         9/24/2025  10:12 AM                P3




Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         9/24/2025  10:12 AM                Command
d-----         9/24/2025  10:12 AM                tmp
d-----         9/24/2025  10:12 AM                Else


    Directory: C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command


Mode                 LastWriteTime         Length Name
```

```
PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux> # Create file with content
>> " P3 file content" | Out-File -FilePath "home\mugisha\Practice\P3\P3" -Encoding utf8
>> "Here directory file" | Out-File -FilePath "home\mugisha\Command\Here_file" -Encoding utf8
>> "hereWeAre file" | Out-File -FilePath "home\mugisha\Practice\P3\hereWeAre" -Encoding utf8
PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux> # List contents (long listing)
>> Get-ChildItem -Path "home\mugisha\Command\Here" | Format-List
>>
>> # Copy a single file (from P3 to Command)
>> Copy-Item -Path "home\mugisha\Practice\P3\P3" -Destination "home\mugisha\Command\"
>>
>> # Copy all files from P3 to Command
>> Copy-Item -Path "home\mugisha\Practice\P3\*" -Destination "home\mugisha\Command\"
PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux>
```

```
    Directory: C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         9/24/2025  10:22 AM                Command
d-----         9/24/2025  10:12 AM                Else
d-----         9/24/2025  10:12 AM                Practice
d-----         9/24/2025  10:12 AM                tmp


    Directory: C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         9/24/2025  10:09 AM                Here
-a----         9/24/2025  10:22 AM             19 hereWeAre
-a----         9/24/2025  10:26 AM             24 Here_file
-a----         9/24/2025  10:22 AM             21 P3


    Directory: C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice


Mode                 LastWriteTime         Length Name
```

Question 1: a) code:

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux> # Step into P3 (if not already)

>> Set-Location -Path "home\mugisha\Practice\P3"

>>

>> # Relative cd: move up three levels (P3 -> Practice -> mugisha -> home)

>> Set-Location -Path "..\..\.."

>>

>> # Confirm location

>> Get-Location

 Screenshot:

```
PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux> # Step into P3 (if
>> Set-Location -Path "home\mugisha\Practice\P3"
>>
>> # Relative cd: move up three levels (P3 -> Practice -> mugisha -> home)
>> Set-Location -Path "..\..\.."
>>
>> # Confirm location
>> Get-Location

Path
----
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home
```

b)

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha"

>> Get-Location

Screenshot:

```
PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home> Set-Location -Path "C:\Users\DELL\desktop\assignement
1\Introduction_to_linux\home\mugisha"
>> Get-Location

Path
----
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha


PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha>
```

Question 2: PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha> # Show current working directory

>> Get-Location

>>

>> # Show top-level items in the repo root

>> Get-ChildItem -Force -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux" |

>>   Select-Object Name,Mode

Screenshot:

```
Path
----
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha

Name : .git
Mode : d--h--


Name : assignment1_files
Mode : d-----


Name : home
Mode : d-----


Name : screenshots
Mode : d-----


Name : commands.txt
Mode : -a----


Name : README.md
```

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha> # Absolute path listing (long-like format)

>> Get-ChildItem -Force -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\Here" |

>>   Select-Object Mode,LastWriteTime,Length,Name |

>>   Format-Table -AutoSize

```
Mode    LastWriteTime          Length Name
----    -------------          ------ ----
-a---- 9/24/2025 10:35:14 AM      21 file1.txt
-a---- 9/24/2025 10:35:14 AM      21 file2.txt
```

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha> # Step 1: Move to Command directory using absolute path (to avoid accidental path concatenation)

>> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command"

>>

>> # Confirm current location

>> Get-Location

>>

>> # Step 2: List the Here directory (relative)

>> Get-ChildItem -Force -Path ".\Here" |

>>   Select-Object Mode,LastWriteTime,Length,Name |

>>   Format-Table -AutoSize

```
Path
----
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command


Mode    LastWriteTime          Length Name
----    -------------          ------ ----
-a---- 9/24/2025 10:35:14 AM      21 file1.txt
-a---- 9/24/2025 10:35:14 AM      21 file2.txt
```

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> # Create sample files (absolute paths)

>> "Sample content 1" | Out-File -FilePath "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\Here\file1.txt" -Encoding utf8

>> "Sample content 2" | Out-File -FilePath "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\Here\file2.txt" -Encoding utf8

>>

>> # Then list

>> Get-ChildItem -Force -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\Here" |

>>   Select-Object Mode,LastWriteTime,Length,Name |

>>   Format-Table -AutoSize

```
>>    Format-Table -AutoSize

 Mode    LastWriteTime           Length Name
 ----    -------------           ------ ----
 -a---- 9/24/2025 10:40:29 AM       21 file1.txt
 -a---- 9/24/2025 10:40:29 AM       21 file2.txt
```

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> Get-ChildItem -Force -Path
"C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\Here_file" |

>>   Select-Object Mode,LastWriteTime,Length,Name |

>>   Format-List

```
Mode          : -a----
LastWriteTime : 9/24/2025 10:26:06 AM
Length        : 24
Name          : Here_file
```

Question 3:

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> # Confirm source exists

>> Get-Item -LiteralPath
"C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3" |

>>   Format-List FullName,Mode,Length

```
FullName : C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3
Mode     : -a----
Length   : 23
```

a) PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> # Change to P2

>> Set-Location -Path
"C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P2"

>>

>> # Copy P3 file from sibling P3 to Command

>> Copy-Item -Path "..\P3\P3" -Destination "..\..\Command\" -Verbose

>>

>> # Verify the file was copied

>> Get-ChildItem -Path "..\..\Command" | Select-Object Name,Length,LastWriteTime | Format-Table -AutoSize

```
Name        Length LastWriteTime
----        ------ -------------
Here               9/24/2025 10:35:14 AM
hereWeAre 19       9/24/2025 10:22:03 AM
Here_file 24       9/24/2025 10:26:06 AM
P3        23       9/24/2025 10:26:06 AM
```

b) PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P2> # Change to P3

>> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3"

>>

>> # Copy single file P3 to Command (relative destination)

>> Copy-Item -Path "P3" -Destination "..\..\Command\" -Verbose

>>

>> # Verify

>> Get-ChildItem -Path "..\..\Command" | Select-Object Name,Length,LastWriteTime | Format-Table -AutoSize

```
Name        Length LastWriteTime
----        ------ -------------
Here               9/24/2025 10:35:14 AM
hereWeAre 19       9/24/2025 10:22:03 AM
Here_file 24       9/24/2025 10:26:06 AM
P3        23       9/24/2025 10:26:06 AM
```

c)

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3> # Change to Command

>> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command"

>>

>> # Copy the single file from Practice/P3 into current directory

>> Copy-Item -Path "..\Practice\P3\P3" -Destination "." -Verbose

>>

>> # Verify the file now in Command

>> Get-ChildItem -Path "." | Select-Object Name,Length,LastWriteTime | Format-Table -AutoSize

```
>> # Verify the file now in Command
>> Get-ChildItem -Path "." | Select-Object Name,Length,LastWriteTime | Format-Table -AutoSize
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3 Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\P3".

Name        Length LastWriteTime
----        ------ -------------
Here               9/24/2025 10:35:14 AM
hereWeAre   19     9/24/2025 10:22:03 AM
Here_file   24     9/24/2025 10:26:06 AM
P3          23     9/24/2025 10:26:06 AM
```

d) PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> Copy-Item -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3" `

>>   -Destination "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\" -Verbose

>>

>> # Verify

>> Get-ChildItem -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command" |

>>   Select-Object Name,Length,LastWriteTime | Format-Table -AutoSize

```
>> Select-Object Name,Length,LastWriteTime | Format-Table -AutoSize
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3 Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\P3".

Name        Length LastWriteTime
----        ------ -------------
Here               9/24/2025 10:35:14 AM
hereWeAre   19     9/24/2025 10:22:03 AM
Here_file   24     9/24/2025 10:26:06 AM
P3          23     9/24/2025 10:26:06 AM
```

Question 4

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> Get-ChildItem -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3" |

```
>>     Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

Mode    Name      Length LastWriteTime
----    ----      ------ -------------
-a----  hereWeAre    22 9/24/2025 10:26:06 AM
-a----  P3           23 9/24/2025 10:26:06 AM
```

a) PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> # Change to P2

>> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P2"

>>

>> # Copy all contents of sibling P3 into Command (include subfolders)

>> Copy-Item -Path "..\P3*" -Destination "..\..\Command\" -Recurse -Verbose

>>

>> # Verify

>> Get-ChildItem -Path "..\..\Command" | Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

```
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\a.txt Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\a.txt".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\b.txt Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\b.txt".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\hereWeAre Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\hereWeAre".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3 Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\P3".

Mode    Name       Length LastWriteTime
----    ----       ------ -------------
d-----  Here              9/24/2025 10:35:14 AM
-a----  a.txt         18 9/24/2025 10:55:27 AM
-a----  b.txt         18 9/24/2025 10:55:27 AM
-a----  hereWeAre     22 9/24/2025 10:26:06 AM
-a----  Here_file     24 9/24/2025 10:26:06 AM
-a----  P3            23 9/24/2025 10:26:06 AM
```

b)

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P2> # Change to P3

>> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3"

>>

>> # Copy everything in current folder to Command (include subfolders)

>> Copy-Item -Path "* " -Destination "..\..\Command\" -Recurse -Verbose

>>

>> # Verify

>> Get-ChildItem -Path "..\..\Command" | Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

```
>> Get-ChildItem -Path "..\..\Command" | Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

Mode    Name       Length LastWriteTime
----    ----       ------ -------------
d-----  Here              9/24/2025 10:35:14 AM
-a----  a.txt      18     9/24/2025 10:55:27 AM
-a----  b.txt      18     9/24/2025 10:55:27 AM
-a----  hereWeAre  22     9/24/2025 10:26:06 AM
-a----  Here_file  24     9/24/2025 10:26:06 AM
-a----  P3         23     9/24/2025 10:26:06 AM
```

c) PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3> # Change to Command

>> Set-Location -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command"

>>

>> # Copy all items from Practice\P3 into current directory

>> Copy-Item -Path "..\Practice\P3*" -Destination "." -Recurse -Verbose

>>

>> # Verify

>> Get-ChildItem -Path "." | Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

```
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\a.txt".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\b.txt Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\b.txt".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\hereWeAre Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\hereWeAre".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3 Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\P3".


Mode    Name      Length LastWriteTime
----    ----      ------ -------------
d-----  Here             9/24/2025 10:35:14 AM
-a----  a.txt     18     9/24/2025 10:55:27 AM
-a----  b.txt     18     9/24/2025 10:55:27 AM
-a----  hereWeAre 22     9/24/2025 10:26:06 AM
-a----  Here_file 24     9/24/2025 10:26:06 AM
-a----  P3        23     9/24/2025 10:26:06 AM
```

d) PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> Copy-Item -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3*" `

>>   -Destination "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\" `

>>   -Recurse -Verbose

```
>>          -Destination  C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\
>>          -Recurse -Verbose
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\a.txt Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\a.txt".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\b.txt Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\b.txt".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\hereWeAre Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\hereWeAre".
VERBOSE: Performing the operation "Copy File" on target "Item:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Practice\P3\P3 Destination:
C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command\P3".
```

Verify the destination now contains the copied items:

PS C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command> Get-ChildItem -Path "C:\Users\DELL\desktop\assignement1\Introduction_to_linux\home\mugisha\Command" |

>>   Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

```
>>    Select-Object Mode,Name,Length,LastWriteTime | Format-Table -AutoSize

Mode    Name      Length LastWriteTime
----    ----      ------ -------------
d----- Here              9/24/2025 10:35:14 AM
-a---- a.txt      18     9/24/2025 10:55:27 AM
-a---- b.txt      18     9/24/2025 10:55:27 AM
-a---- hereWeAre  22     9/24/2025 10:26:06 AM
-a---- Here_file  24     9/24/2025 10:26:06 AM
-a---- P3         23     9/24/2025 10:26:06 AM
```

- 5) **Question 3** copies a **single file** named P3 from inside the P3 directory into the Command directory.
  Example from your Q3:
- `Copy-Item -Path "..\P3\P3" -Destination "..\..\Command\" -Verbose`

  👉 Only that one file is copied.

- **Question 4** copies **all files and subdirectories** inside the P3 directory into the Command directory.
  Example from your Q4:
- `Copy-Item -Path "..\P3\*" -Destination "..\..\Command\" -Recurse -Verbose`

  👉 Every item in P3 (files, subfolders, contents) is copied.

Difference: Q3 = copy **one file**, Q4 = copy **everything** in the directory.

6)

- **Yellow** indicates a **directory (folder)**.
- **Blue** indicates a **regular file**.
- The item hereWeAre was created using:
- `"hereWeAre file" | Out-File -FilePath "...\Practice\P3\hereWeAre"`

  This creates a **file** (with no extension), not a directory.

👉 Therefore, **hereWeAre should be blue**, because it is a **file**, not a folde