# Using Arrays and Hashtables

Jeff Hicks
AUTHOR/TEACHER

@jeffhicks | https://jdhitsolutions.com

PowerShell language elements often used in scripts

But you can use them in an interactive console session

These are common features found in many languages

You will use them constantly

# Array

A data structure that is designed to store a collection of items. The items can be the same type or different types.

An array is a collection of things

Any PowerShell command that writes objects can create one

You can manually initialize an array

```
PS C:\> $a = 3,5,9
```

# Array Fundamentals

Any comma-separated list is an array

```
PS C:\> $a = 3,5,9
PS C:\> $a
3
5
9
```

# Array Fundamentals

Any comma-separated list is an array

PowerShell will automatically “unroll” the array

```
PS C:\> $a = 3,5,9
PS C:\> $a
3
5
9
PS C:\> $a | get-member

 TypeName: System.Int32
…
```

# Array Fundamentals

Any comma-separated list is an array

PowerShell will automatically “unroll” the array

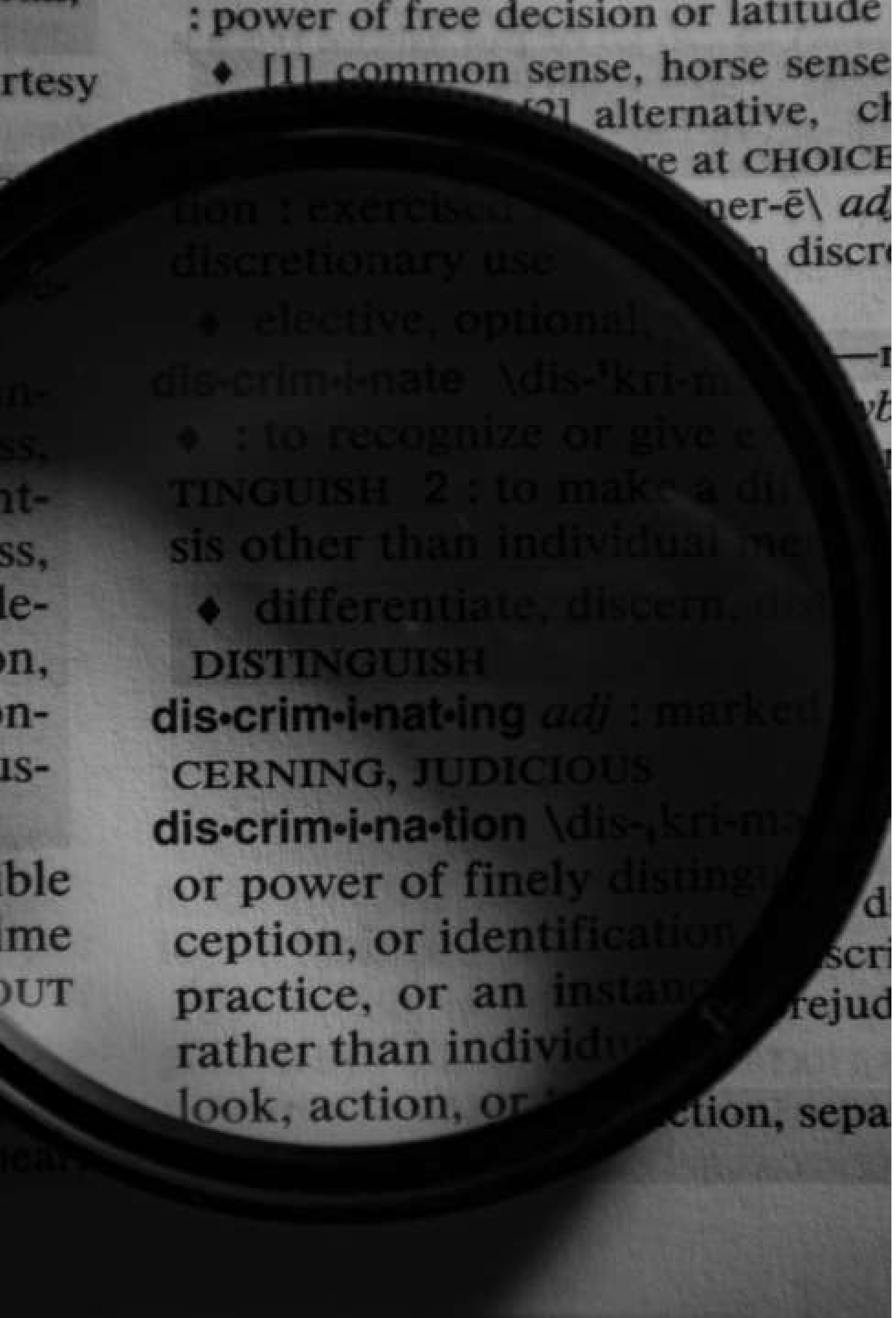
It is the objects in the array that matter

# Demo

Working with Arrays in PowerShell

# Hashtable

A data structure with Key/Value pairs. Keys are unique.



Used often in PowerShell to store data

Create custom properties and values

Can be used as a lookup

Can be used to simplify running a command

```
PS C:\> $h = @{Name='Jeff';Count=3}
```

# Hashtable Fundamentals

You have to manually create a hashtable

@{Key = Value}

Separate entries with semi-colon or new line

```
PS C:\> $h = @{Name='Jeff';Count=3}
PS C:\> $h

Name                           Value
----                           -----
Count                          3
Name                           Jeff
```

# Hashtable Fundamentals

The hashtable name is the key

```
PS C:\> $h = @{Name='Jeff';Count=3}
PS C:\> $h

Name                           Value
----                           -----
Count                          3
Name                           Jeff

PS C:\> $h.name
Jeff
```

# Hashtable Fundamentals

The hashtable name is the key

You can reference items like an object

# Demo

Working with Hashtables in PowerShell