

Power of 10

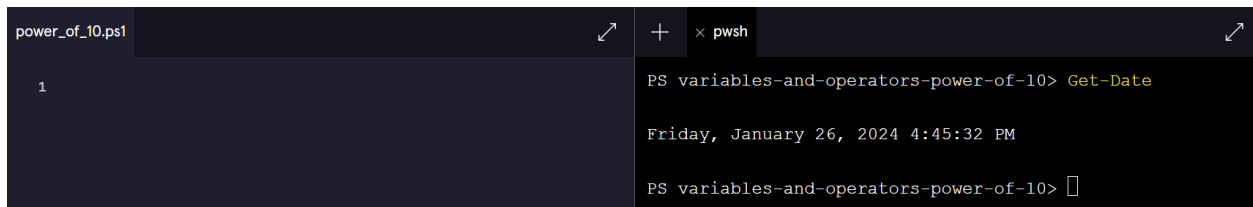
By Max Santomauro

- **Note:** This project was done with the scripting environment and PowerShell terminal available through Codecademy ([codecademy.com](https://www.codecademy.com)).

Project Description

I created a script in which the script takes any number and always outputs the value **10** in the PowerShell terminal.

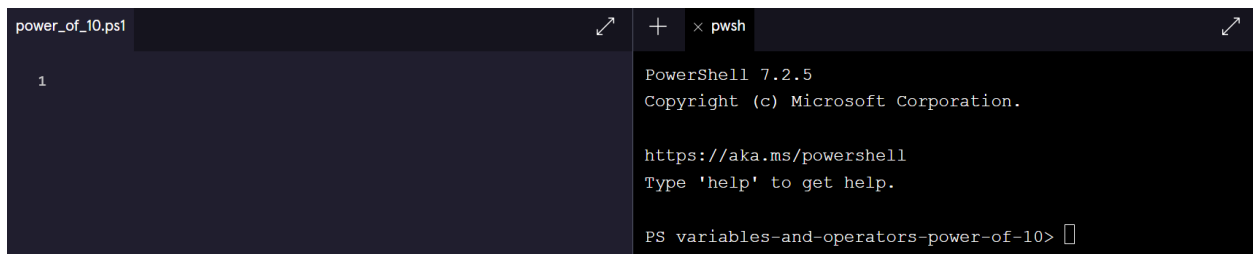
Project Start Timestamp



The screenshot shows a PowerShell terminal window with the title bar 'power_of_10.ps1'. The terminal content displays the output of the 'Get-Date' command: 'Friday, January 26, 2024 4:45:32 PM'. The prompt is 'PS variables-and-operators-power-of-10>'.

Environment Setup

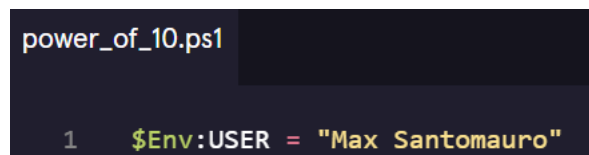
This is the setup of the environment within Codecademy. It includes a script called **power_of_10.ps1** and the latest terminal version of **PowerShell**:



The screenshot shows a PowerShell terminal window with the title bar 'power_of_10.ps1'. The terminal content displays the PowerShell version and copyright information: 'PowerShell 7.2.5', 'Copyright (c) Microsoft Corporation.', 'https://aka.ms/powershell', and 'Type \'help\' to get help.'. The prompt is 'PS variables-and-operators-power-of-10>'.

Environment Variable Setup

1. First thing I did is create an environment variable that gets my name. To do this, I wrote this in the script:



The screenshot shows a PowerShell script file named 'power_of_10.ps1'. The script content is: '\$Env:USER = "Max Santomauro"'. The line number '1' is visible on the left.

2. This environment variable can be verified by either printing the value of the **USER** in the script with **\$Env:USER** and calling the script in the terminal or listing all the environment variables in the PowerShell terminal with command **Get-Childitem Env:USER**. Which is shown below:

Created within script and script outputted in terminal

```
power_of_10.ps1  + x pwsh
1 $Env:USER = "Max Santomauro"
2 $Env:USER

PowerShell 7.2.5
Copyright (c) Microsoft Corporation.

https://aka.ms/powershell
Type 'help' to get help.

PS variables-and-operators-power-of-10> ./power_of_10.ps1

Max Santomauro
```

Listing all environment variables in PowerShell

(USER highlighted in yellow)

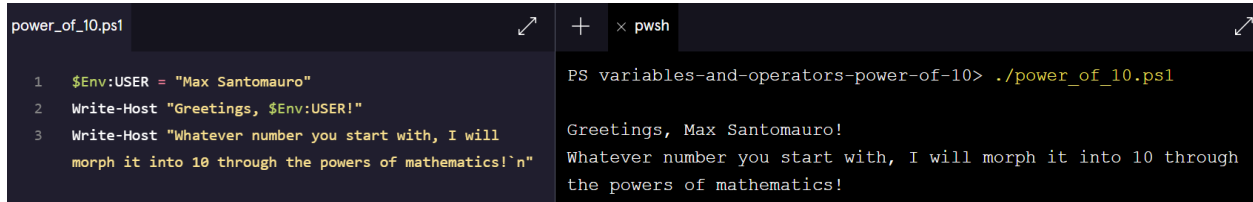
```
power_of_10.ps1  + x pwsh
1 $Env:USER = "Max Santomauro"
2

PS variables-and-operators-power-of-10> Get-ChildItem Env:

Name                           Value
----                           -
BROWSERSLIST_IGNORE_OLD_DATA    1
EIN_IMAGE                       ubuntu
EXPIRES_AT                      1706216747
HOME                            /home/ccuser
HOSTNAME                        82c0259e996a
LANG                            en_US.UTF-8
LOG_LEVEL                       2
PATH                            /opt/microsoft/powershell/7:/home/ccuser/.bin:/usr/...
POWERSHELL_UPDATECHECK          Off
PSModulePath                    /home/ccuser/.local/share/powershell/Modules:/usr/l...
PWD                             /home/ccuser/workspace/variables-and-operators-powe...
SESSION_ID                      a11d3392-d327-4176-8859-ab1d22aa0519
TERM                            xterm
TZ                              Etc/UTC
USER                            Max Santomauro
WORKSPACE_SERVICE_HOST          https://workspace.production-eks.codecademy.com
```

Greetings

- I created a couple of **Write-Host** cmdlets, which includes my USER name in the first one, within the script and called the script in the terminal to confirm the initial output.



The screenshot shows a PowerShell terminal window with two panes. The left pane, titled 'power_of_10.ps1', contains a script with three lines: `$Env:USER = "Max Santomauro"`, `Write-Host "Greetings, $Env:USER!"`, and `Write-Host "Whatever number you start with, I will morph it into 10 through the powers of mathematics!"`n"`. The right pane, titled 'pwsh', shows the command `PS variables-and-operators-power-of-10> ./power_of_10.ps1` and its output: `Greetings, Max Santomauro!` followed by a blank line and `Whatever number you start with, I will morph it into 10 through the powers of mathematics!`.

User's Input

- In the script, I used the **Read-Host** command along with the **-Prompt** function to get the user to input a number and saved it to a constrained variable called **original_number** with an **Int** type.
 - Note: Int** refers to integer only. So if I type anything other than an integer, there will be an error when called in the PowerShell prompt.

```
5 [Int]$original_number = Read-Host -Prompt "Type a number, any number"
```

- To manipulate the user's value without changing the **original_number** variable, I assigned the variable to a new variable called **final_number** and revised the new variable by adding 5.

```
6 $final_number = $original_number
7 $final_number += 5
```

- I then did other operations to manipulate the **final_number** variable.

```
6 $final_number = $original_number
7 $final_number += 5
8 $final_number *= 3
9 $final_number -= 15
10 $final_number /= $original_number
11 $final_number += 7
```

7. I then had to determine if the **final_number** is equal to **10** by using the equality comparison operator, Which is **-eq** and saved it to a variable called **number_is_10**.

```
13  $number_is_10 = $final_number -eq 10
14  $number_is_10
```

8. Lastly, I printed the results using the **Write-Host** command in the script (lines 16 & 17) and ran the script in the PowerShell terminal. I picked the number 7 as a test output in the terminal.

<pre>power_of_10.ps1 1 \$Env:USER = "Max Santomauro" 2 Write-Host "Greetings, \$Env:USER!" 3 Write-Host "Whatever number you start with, I will morph it into 10 through the powers of mathematics!"`n" 4 5 [Int]\$original_number = Read-Host -Prompt "Type a number, any number" 6 \$final_number = \$original_number 7 \$final_number += 5 8 \$final_number *= 3 9 \$final_number -= 15 10 \$final_number /= \$original_number 11 \$final_number += 7 12 13 \$number_is_10 = \$final_number -eq 10 14 \$number_is_10 15 16 Write-Host "The number is equal to 10: \$number_is_10." 17 Write-Host "The final number is \$final_number."</pre>	<pre>+ x pwsh PS variables-and-operators-power-of-10> ./power_of_10.ps1 Greetings, Max Santomauro! Whatever number you start with, I will morph it into 10 thro ugh the powers of mathematics! Type a number, any number: 7 True The number is equal to 10: True. The final number is 10. PS variables-and-operators-power-of-10> </pre>
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Project End Timestamp

```
The number is equal to 10: True.
The final number is 10.
PS variables-and-operators-power-of-10> Get-Date

Friday, January 26, 2024 6:04:40 PM

PS variables-and-operators-power-of-10> 
```