


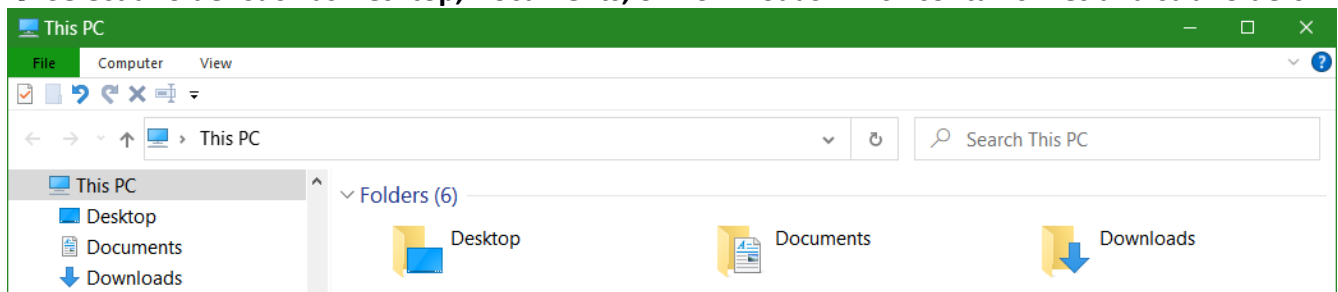
Part 1 of 2: PowerShell

- ❖ [Install PowerShell 7 on Windows, macOS, or Linux on x86, x64, ARM64 architectures including Apple M1](#)
- ❖ Explore Microsoft's cross-platform [PowerShell](#) and its Command Line interface.
 - Many PowerShell commands have aliases to similar commands usable under the Windows (DOS) or Linux command prompt making PowerShell easier to use for those with different technical backgrounds.

→ **Open a File Explorer:** Windows Key  + E

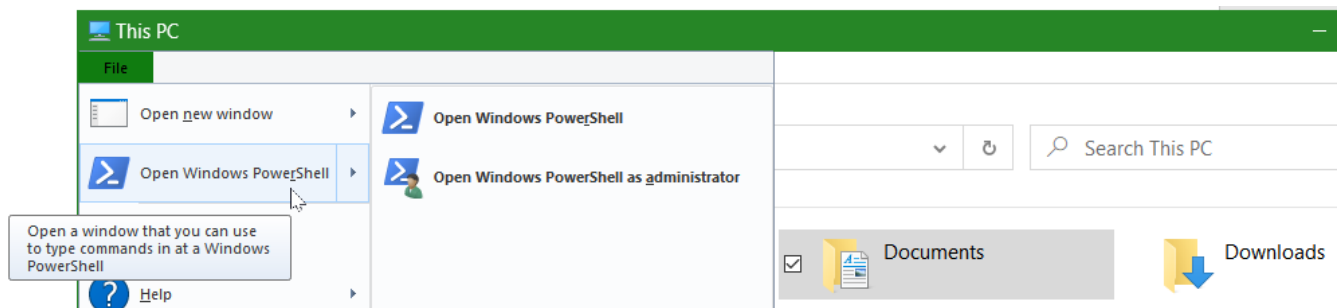
File Explorer starts at "This PC". However, PowerShell sessions are done *within a folder/directory*, not at the system level. Although you can start at the root, that is a dangerous and almost always time-consuming place from which to run operating systems commands.

→ **Select a folder such as Desktop, Documents, or Downloads which contains files and sub-folders.**



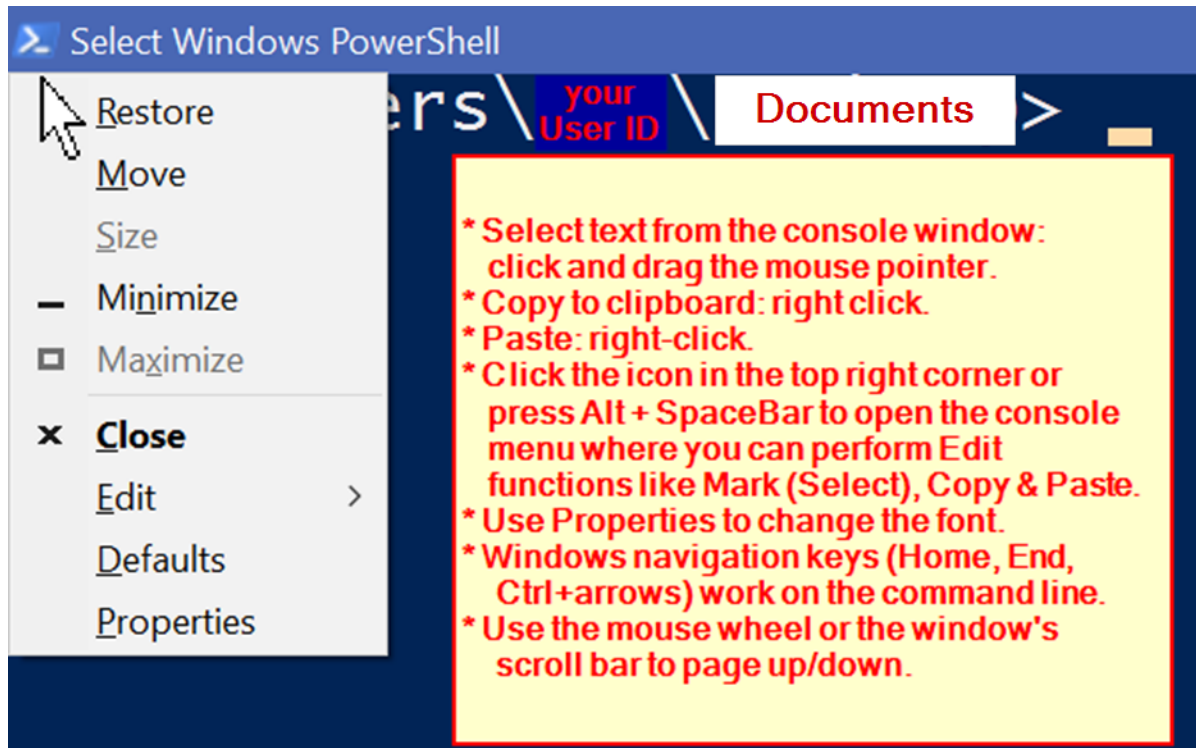
→ Use the File menu to open a PowerShell command window: **Alt + F, R**

- If "Open Windows PowerShell" is greyed out, you are still at "This PC". Please see the instruction immediately above.
- There are always two options when running any command:
 - run under the authority of the signed-on user or as an administrator.
 - Which Open option do you use?



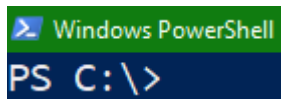
- Answer:
 - Not "as administrator" unless absolutely required. Don't risk accidentally ruining the system.
 - Never if end-users will run your script. "as administrator" is not an option they get.
 - Casual or end-users should never have access to any kind of command line interface.

A PowerShell window offers many built-in features for power users.



Left click down, drag, release, Right click – copies text and whole lines.

Alt+Left click down, drag, release, Right click – copies a rectangle of text across lines.



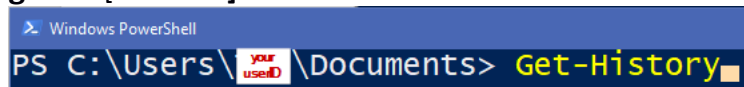
*If you see this **PS C:\>**, you are at the root. That is potentially dangerous, and some of this exercise's commands will take forever to complete.*

39 points, 3 points for each of 13 questions in Part 1 of 2. Many answers can be copied from the PowerShell session and pasted into the answer document.

At the PS (PowerShell) prompt, enter the **get-history** command.

PowerShell's native commands are of the form: **verb-noun** or **action-object** (hyphenated without a space).

As in Visual Studio, the TAB key can help to complete commands, switches, and parameters. Try **get-h [TAB TAB]**



➔ 1. What was the response to the **get-history** command?

(If the answer is *nothing*, you have successfully ignored the starting notes. Something *is* expected.)

Note: to find a previously run command, use the up-arrow key to recall commands from the history stack to the command line. To see all previously run commands, use **get-history** at any time.

Enter the command: **get-help**

You may see this on a lab computer or possibly on your own computer:

Do you want to run Update-Help? **yes, you do.**

The Update-Help cmdlet downloads the most current Help files for Windows PowerShell modules, and installs them on your computer.

For more information about the Update-Help cmdlet, see

<http://go.microsoft.com/fwlink/?LinkId=210614>.

[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"): **← Enter Y=Yes**

On your own computer, [to be sure you have all the help modules](#)...

It is always a good idea to run Windows Updates first.

In earlier versions of Win10 OS, this could be done from the PowerShell command line using the Start-WUScan and Install-WUUpdates commands.

To update the help successfully, this almost always works without an error:

> Start-Process powershell -ArgumentList "update-help -Force" -Verb runAs

You may see some error messages in red text like this:

**Update-Help : Failed to update Help for the module(s)
'ConfigDefender, Microsoft.WSMan.Management, PSReadline,
WindowsUpdateProvider, or others'**

No worries. It has been a [known problem](#) for some time.

➔ 2. after running **> get-help** (again) What is the **SHORT DESCRIPTION** that was output? (scroll up to see all the help text)

PowerShell can get information about various system processes or services.

Try **> Get-Process**

Now try **> Get-Process | sort-object CPU -descending | select -first 10**

and copy/paste the output here. You can probably guess what the command will do.

It shows the top 10 processes using the most CPU seconds.

➔ 3. copy/paste the text of the top 10 processes

Enter and run each of these three commands, one at a time:

> dir

> ls

> get-childitem

If there is no output, it means there is nothing to list at the current location (directory).

A good interface would say "This folder is empty" like File Explorer does.

If there is no output, **navigate to the Documents folder or any folder that is not empty and repeat.**

➔ 4. Do you recognize any of these commands? Did they all do the same thing? What did they do?


➔ 5. Copy about 10 lines of output from the **get-childitem** command and paste here.

Assuming you are at a current folder/directory that contains subfolders/dir and that is not C:\ or C:\users, enter the command:

> get-childitem -recurse

➔ 6. What was different about the output this time?

Enter the command: **get-childitem -recurse > giveThisAmeaningfulFilename.txt**

➔ 7. What was different about the output this time? (If it seemed like nothing happened, see the next task. If there are write permission or “denied access” errors, hold the Windows key  and paste “Controlled Folder Access”.)

Search for the _____ .txt file using the TAB key.

Type: ***.txt**[press TAB key] or type: **des**[press TAB key]

*Note: do not type a space following the *.txt or des characters, just press the TAB key.*

Depending on the number of files in the Desktop folder matching the *.txt wildcard or files beginning with des, you may have to press the TAB key multiple times. (Note that this TAB technique also works on matrix.)

➔ 8. Once you see ._____ .txt press the Enter key. What happened?

Make a copy of the _____ .txt file. To find the command, remember the **verb-noun** or **action-object** format.

> **get-help copy*** will find all PowerShell commands starting with “copy”. One of them is used to copy a file.

> **get-help PowerShellCommandName** will show a command’s parameters.

While entering parameters for the command, typing **des[TAB,TAB,TAB,...]** will insert the name of a file beginning with "des". This avoids typing mistakes when identifying the target filename. (Note that this TAB technique also works on matrix.)

➔ 9. What is the PowerShell command, including parameters, to copy that file?

To find the delete command,

> **get-alias del** (or **rm**) will show the PowerShell name for the DOS or *nix command.

➔ 10. What is the PowerShell command to delete/remove a file?

> **get-alias -Definition PowerShellCommandName** (substituted from 10. above)

➔ 11. List all the aliases for the PowerShell command to delete/remove a file?

Delete the _____ .txt file.

➔ 12. What was the PowerShell command, including parameters, you ran to delete the file?

Finally, run the **get-history** cmdlet.

➔ 13. Copy the text output from **get-history** and paste (not a screen image)

tomorrow (*noun*) – a mystical land where 99% of all human productivity, motivation, and achievement is stored.

Part 2: Time Attention Management

We don’t have a time management problem; we have an attention management problem.



Time is not something we have; it is a choice we make. It is easy to choose a healthy activity for the next 30 minutes. It is just as easy not to go ahead and do it. A wise psychologist gives us the [algorithm for making and enacting a time choice](#).

You know what to do. Sit down and finish the task. But you don't. Why? Read this...

<https://www.bakadesuyo.com/2016/09/how-to-be-productive-2/> and this...

<https://getpocket.com/explore/item/how-to-beat-procrastination-backed-by-science>

[Delayed gratification](#) and [grit](#) is the ability to resist an immediate reward (checking [social media](#)) to gain a greater but later benefit (course work now, success later). But the trouble with delayed gratification is that it takes too long. A better way to think of it is choosing between what you want *now* and what you want *most*.

More things to consider...if you have time:

- ❖ [Time management isn't the problem – our attention span is](#)
- ❖ Pay attention to your **ATTENTION**
 - [“I think, therefore I am distracted.”](#)
 - Your [brain and attention](#) from [Amishi Jha](#), a neuroscientist with useful info
 - [I Used to Be a Human Being](#) Andrew Sullivan's widely read essay
- ❖ Not knowing where to begin is a common form of paralysis (AKA procrastination). Composer John Cage's advice: *Begin anywhere*. Just begin, even for only two minutes. Newton explains: tasks in motion tend to stay in motion. Tasks at rest tend to stay at rest.
- ❖ [Working within constraints](#) can be better than a blue sky and a green field.
 - [Pomodoro Technique](#) -- now a classic method of getting it done in 25 minutes. (The time limit is a constraint.)
- ❖ Good ideas of time management in a manageable 10 minutes:
How to Manage Time, Reduce Stress and Increase Happiness
<https://www.youtube.com/watch?v=N4YVLkuRBe8>
- ❖ Why Do We Procrastinate? And what to do about it.
<https://www.youtube.com/watch?v=pKyHX0zgynk> 8 ½ minutes
- ❖ Procrastination has taught me how to do 30 minutes of work in 8 hours and 8 hours of work in 30 minutes.
- ❖ "Procrastination has been around since the start of modern civilization." You've got lots of company. <https://dariusforoux.com/beat-procrastination/>
- ❖ [You Don't Have a Procrastination Problem, You Have an Impulsivity Problem](#)
- ❖ Procrastination may be the world's most popular form of time management but [it isn't all bad](#).
- ❖ [Procrastination Research Group](#) – podcasts and research from Carleton University in Ottawa
 - procrastination provides 'short-term mood repair' when a task we don't want to do – but should do – overwhelms us. [Blog post from a researcher](#)
- ❖ Windows 10 Focus Assist
 - <https://www.howtogeek.com/435349/how-to-disable-windows-10s-annoying-focus-assist-notifications/>
- ❖ In the Attention Economy, technology and media are designed to maximize our screen-time. Your 3 min. 48 sec. is time well spent at <http://humanetech.com/designers/> (also at <https://www.youtube.com/watch?v=tf9ZhU7zF8s>). Then [Take Control](#) over the devices and apps



that take your time away. The Center for Humane Technology, formerly timewellspent.io, was co-founded by [Tristan Harris](#), the “closest thing Silicon Valley has to a conscience”.

- ❖ If you waste time making a time machine, is time really wasted?
<https://www.bakadesuyo.com/2018/11/wasting-time-on-the-internet/>
- ❖ [How to Beat Procrastination](#) from the Shopify Blogs
- ❖ [Two Things Killing Your Ability to Focus](#)
- ❖ [How to Make Yourself Work When You Just Don't Want To](#)
- ❖ Brain hacks to get more done



24-brain-hacks-to-get-more-done.pdf

- ❖ [Forest: smartphone game you play by not using your phone](#)
- ❖ "An unwelcome consequence of living in a world where everything is 'easy' is that the only skill that matters is the ability to multitask. ...which is a flimsy basis for a life." [Tim Wu](#) author of “The Attention Merchants: The Epic Struggle to Get Inside Our Heads” The result may be [I have forgotten how to read.](#)

Because you don't have enough time, run YouTube videos at double speed; see Settings

- ❖ You don't sleep because you don't have enough time? You've got it backwards. You don't have time because you don't get enough sleep. See [this](#) and [this](#).
- ❖ How to build your own [time machine](#) (12 min.)
- ❖ Inside the mind of a master procrastinator (18 min.)
http://www.ted.com/talks/tim_urban_inside_the_mind_of_a_master_procrastinator
- ❖ Sleep quality and quantity are closely related to student learning capacity (attention, memory) and academic performance (problem-solving, GPA).
 - Review the [Research](#). e.g. Curcio et al, 2006. There is even a [Wikipedia page](#).
 - [Too little sleep](#) = missing a [sleep cycle](#) for 5 – 7 nights will lose you ~15 IQ points (Cohen, 1997. *Sleep Thieves*) You will be 2.5 – 5 times more likely to become ill – just like your mother said – due to a lowered immune system. Also: weight gain, exercise shortfall, mental health issues such as depression, anxiety, and feeling 'stressed out' (high cortisol levels) all of which

consequently make you less effective resulting in everything taking more time that you already don't have enough of.

❖ “You are what you do, not what you say you’ll do.” – Carl Jung



What three things will you do to improve your time and attention management? (61 points)

The answers that count are those that help you make best use of your day, doing the right things, and doing things right. Three one-line bullets of what you will do to make those things happen are worth 7 points **in total** (2.333 points each a.) **Explanations** of **why** (motivation & benefit) and **how** you will act (process) is worth the other 54 points (18 points, 150+ words each b.) Note that the minimum word count gets more or less average marks depending on the quality of content. To go above average, see the marking rubric in the course Announcements.

Attention Management and Time Choices

- ➔ 1a. What you'll do (2.333 points)
- ➔ 1b. Why and how you'll do it (18 points for 150+ words)

- ➔ 2a. What you'll do (2.333 points)
- ➔ 2b. Why and how you'll do it (18 points for 150+ words)

- ➔ 3a. What you'll do (2.333 points)
- ➔ 3b. Why and how you'll do it (18 points for 150+ words)