Anthony DeBarros

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Setting up Python in Windows 10

JUN 21, 2018 | 93 COMMENTS

Installing Python under Windows 10 is fairly easy as long as you set up your system environment correctly. Below is my quick guide, which follows similar how-to's I've written for **installing Python under Windows 7** and **under Windows 8.1**.

Ready? Here's your quick guide:

Set up Python on Windows 10

- 1. Visit the official **Python download page** and grab the Windows installer for the latest version of Python 3. One note:
 - Python is available in two versions Python 2 and Python 3. For beginners, that may be confusing. In short, Python 3 is the current and future state of the language; Python 2 is a legacy version that still has a large base of users. Python 2 will **reach its end of life in January 2020** and will only get bug fixes till then.
- 2. Right-click on the installer and select "Run as Administrator." Click "Yes" when Windows asks if you want the program to make changes to your computer.
- 3. The next dialog asks whether you want to "Install Now" or "Customize Installation." You want to "Customize Installation," so click that.
- 4. On the next screen, check all boxes under "Optional Features." Click next.
- 5. Under "Advanced Options," set the location where you want to install Python. For ease, I use:

C:\Python37-32

That refers to an installation of 32-bit Python 3.7.

- 6. Also under "Advanced Options," check the boxes for "Install for all users," "Associate files with Python" and "Create shortcuts for installed applications."
- 7. Click "Install." When the installation finishes, close the installer.
- 8. Next, set the system's PATH variable to include directories that include Python components and packages we'll add later. To do this:
 - Open the Control Panel (easy way: click in the Windows search on your task bar, type "Control Panel," then click the icon).
 - In the Control Panel, search for Environment; click Edit the System Environment Variables. Then click the Environment Variables button.
 - In the User Variables section, you will need to either edit an existing PATH variable or create one. If you're editing an existing PATH, the values are presented on separate lines in the edit dialog, like this:

```
C:\Python37-32
C:\Python37-32\Lib\site-packages\
C:\Python37-32\Scripts\
```

• If no PATH variable exists on your system, create one by clicking New. Make PATH the variable name and add the above directories to the variable values section as shown, separated by a semicolon:

```
C:\Python37-32;C:\Python37-32\Lib\site-packages;C:\Python37-32\Scripts
```

- Click OK to close all the Control Panel dialogs.
- 9. Now, you can open a command prompt (Start Menu > Windows System > Command Prompt) and type:

```
python
```

That will load the Python interpreter:

```
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win 32 Type "help", "copyright", "credits" or license for more information.
```

Because of the settings you included in your PATH variable, you can now run this interpreter — and, more important, a script — from any directory on your system.

Type <code>exit()</code> and hit Return to exit the interpreter and get back to a C: prompt.

Optional: Set up useful Python packages

Python 3 comes with the package installer **pip** already in place, which makes it super easy to add useful packages to your Python installation. The syntax is this (replace <code>some_package</code> with a package name you want to install):

```
pip install some package
```

1. Let's add a couple of must-have utilities for web scraping: **Requests** and **BeautifulSoup**. You can use pip to install them all with one command:

```
pip install beautifulsoup4 requests
```

2. **csvkit**, which I **covered here**, is a great tool for dealing with comma-delimited text files. Add it:

```
pip install csvkit
```

You're now set to get started using and learning Python under Windows 10. If you're looking for a guide, start with the **Official Python tutorial**.

Attention Data Analysts and Coders: Learn SQL!

My book **Practical SQL: A Beginner's Guide to Storytelling with Data** from No Starch Press offers a step-by-step guide to working with databases. Learn how to wrangle the everyday data you encounter to gain meaningful insights.

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93 responses to "Setting up Python in Windows 10"



Justin 11/04/2015 at 7:50 am

During the install there is a checkbox that says "Add Python 3.5 to PATH." Does this work rather than manually setting it in step 3 above?

Liked by 1 person



Justin 11/04/2015 at 8:03 am

To follow up, checking the box during the install seems to work, at least accessing Python through IDLE (I haven't tried anything else).

Thanks for the helpful instructions!

Like



Carlos 12/09/2015 at 11:33 pm

Thanks man, I am new to Windows 10 and this was really helpful!

Like



Waya 12/14/2015 at 11:38 am

Hallo, this has been very helpfull man. However, I got a problem with pip install some_package command...an error that says could not find a version that satisfies the requirement...any help please

Like



Anthony 12/14/2015 at 11:14 pm

Waya,

Replace some_package with an actual package name, such as csvkit.

Like



Philbert 02/11/2016 at 3:43 am

For me, the default install did not install it to C:\Python35, but to some deep AppData folder (C:\Users\Philbert\AppData\Local\Programs\Python to be exact)

This annoyed me, so I uninstalled it and went for the custom install. There you get the choice to set the install folder (so I set it to C:\Python35) and as mentioned above, to have the installer create the environment variables (path) for you.

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Anthony 02/17/2016 at 3:25 pm

Philbert,

Thanks for the heads-up on that. Looks like Python 3.5's installer now offers that option, and I've made a change to the instructions.



Herramientas y otras curiosidades – El blog de jobenas 02/21/2016 at 10:10 pm

[...] 3 donde se haya instalado. Para el caso de Windows 10 los pasos varían un poco, sin embargo este enlace muestra todos los pasos para esa [...]





Ann 02/27/2016 at 10:31 pm

Thank you for sharing! I'm new to python and window 10. I found the following steps confusing:

In the User Variables section, edit the PATH statement to add this (if there is no PATH variable, click NEW to create one):

C:\Python35-32

C:\Python35-32\Lib\site-packages\

Do I suppose to create three user variables with different names? I try to create a variable named 'PATH', however, when I move to the next directory with the same name, it just clear the previous information. So I'm really confused about what I need to do. Could you provide a step by step instruction for this part? Thanks!





Anthony 03/02/2016 at 4:26 pm

Ann,

I clarified the instructions in the post. Windows 10 presents one dialog if you're creating a new PATH, and a different dialog if you're editing a PATH. (At least that's what I see on my system.)





Philbert 03/03/2016 at 4:55 am

Awesome Anthony. This is the best how to on installing Python that I have seen.





Vera 03/08/2016 at 6:45 am

thank you for that great instructions!!!





Sam 03/09/2016 at 3:51 pm

Anthony,

So in the event that I added the PATH variable, and it still doesn't recognize it, what would you suggest?

Python installed two directories: Python 3.5 and Python35-32, both in Program Files (x86). First I tried to have the installer add the path variables,

but for some reason, that didn't work. I then tried manually adding paths for 35-32, 3.5, and both at the same time, as the following line shows, but none of those worked. It still does not recognize "python" as an internal or external command.

"C:\Program Files (x86)\Python35-32;C:\Program Files (x86)\Python35-32\Lib\site-packages;C:\Program Files (x86)\Python35-32\Scripts;C:\Program Files (x86)\Python 3.5;C:\Program Files (x86)\Python 3.5\Lib\site-packages;C:\Program Files (x86)\Python 3.5\Scripts"

Thanks!

- Sam





Anthony 03/09/2016 at 3:54 pm

Sam,

You definitely don't want to have both installs in your PATH. Choose one and use that. Also, make sure you start a new command prompt after you make the change. If you have a command prompt active while you make the change, it won't be recognized in the active prompt.





Karl 03/17/2016 at 1:05 am

Was a little miffed it wasn't working for me until I read your comment to Sam and remembered I had to reset my cmd. Works like a charm. Running my OS from an SSD and python from my HDD.





Igor Ganapolsky 03/21/2016 at 12:04 pm

Your instructions do not actually install PIP. The only thing they do is install the Python binary. When I try to run 'pip', I get an error "pip' is not recognized as an internal or external command".





Anthony 03/21/2016 at 12:33 pm

Igor,

This tutorial focuses on Python 3, which includes pip: https://docs.python.org/3.5/installing/index.html

Did you install Python 3.5?





Igor Ganapolsky 03/21/2016 at 1:00 pm

Yes, but pip wasn't part of it. I had to install it separately.





Anthony 03/21/2016 at 1:04 pm

Odd.





Prajwal 03/26/2016 at 2:58 am

I changed the PATH variables and everything but yet when I type 'python' on the cmd it display 'no such command found'. I am using windows 10





Anthony 03/27/2016 at 1:42 pm

Prajwal,

Did you quit your command terminal and restart it?





Clulev 05/07/2016 at 7:54 am

Hi, I just added 3.5. I selected the add to path option in the installation tool. It only added C:\Python35-32 and C:\Python34\Scripts\. So I have added C:\Python35-32\Lib\site-packages\ manually. Hopefully this will work.





Anthony 05/07/2016 at 9:56 am

Cluley,

It would be odd to have both C:\Python35-32 and C:\Python34\ paths — that reflects two different versions. Edit to standardize on one or the other.

Also, always quit and restart the command terminal to see changes take effect.





Eshwar 05/21/2016 at 9:17 am

Thanks for this man.. However, I got a problem with pip install some_package command...an error that says could not find a version that satisfies the requirement.. I replaced some_packages to csvkit. Then also the same error continies. Can you please help me





Anthony 05/21/2016 at 6:30 pm

Eshwar,

What happens when you simply type pip on the command line? If that works, what happens when you type pip search csvkit?





Alex 05/30/2016 at 9:15 pm

I have been trying to figure this out for a few days and that advanced options part really helped me! Thank you so much!!!!!





lack 06/17/2016 at 2:51 pm

Um, I still can't do this I set up the path to my documents and it didn't work for setting path





chad 06/17/2016 at 10:15 pm

honestly....I have posted on stackO, etc and you my friend have been my salvation thank you so much for this.





Mike Garrant 07/10/2016 at 9:52 am

After multiple install attempts I getting following when attempting to start python from command prompt:

```
C:\Windows\System32>python
Fatal Python error: Py_Initialize: unable to load the file system
Traceback (most recent call last):
   File "c:\Python35-32\lib\encodings\__init__.py". line 31, in
zipimport.ZipImportError: can't find module 'codecs'
```

C:\Windows\System>

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Anthony 07/10/2016 at 3:25 pm

Mike,

Not quite sure what the issue is, but I suggest Googling the error message and trying a few things with your Python path. Start with: http://stackoverflow.com/questions/18946286/python3-installed-successfully-but-cannot-be-opened-in-terminal

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Edwin F, Meyer 07/16/2016 at 1:56 pm

I can get to the Python shell by typing "python" at the C: prompt OK, but how do I get to the page where indents are automatic, and different colors appear for different types of words, etc.? "IDLE" is not recognized.

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Elise Hang 07/19/2016 at 1:45 am

I followed all the steps mentioned for installation of Python 3.5 and still pip doesn't work for me. When i type pip in the terminal, it displays a message saying – name not defined and i have checked the other link as well. It's simply not working.

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Anthony 07/19/2016 at 8:24 am

Did you close and re-open your terminal window? Also, confirm that your PATH settings are correct.





Pranav 07/29/2016 at 1:58 am

thanks, it works fine.





Matt 08/23/2016 at 11:03 pm

I tried to pip install mechanize, beautiful soup, and requests, but I keep getting an invalid syntax message.





Anthony 08/24/2016 at 8:31 am

Can you post the exact message here? Also, did you restart your terminal window?





Matt 08/24/2016 at 8:08 pm

I started it back up just now and typed in "pip install mechanize beautifulsoup4 requests" and it still gave me the message "syntaxerror: invalid syntax".

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Anthony 08/24/2016 at 10:23 pm

Are you running the command at your C: prompt or within the Python interpreter? pip should be run from your C: prompt (aka command line).





Matt 08/24/2016 at 10:28 pm

I'm not sure. Can you tell me how to get to c: prompt so that I'll know for sure?





Anthony 08/24/2016 at 10:30 pm

Matt,

It's under Start Menu | Windows System | Command Prompt.





Matt 08/24/2016 at 10:37 pm

I couldn't find that in my start menu, so, I searched and it came up. It all worked there. Thank you very much for your help.

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Jason 10/12/2016 at 9:33 pm

Just wanted to say thanks for writing this tutorial. Brand new to python and after 2.5 hours of searching it was your tutorial that finally allowed me to install BeautifulSoup successfully.





Anthony 10/13/2016 at 8:11 am

Jason: Glad to know this is helping people!





Kavish 10/21/2016 at 7:27 am

Great tutorial Anthony!! Worked for me Thanks...





oli 10/27/2016 at 11:31 am

Thank you. Worked like a charm.





Christopher Grazioli 11/23/2016 at 12:30 pm

I have two different classes I'm taking and need both python 2.7 and 3.5. I'm not clear on how to install both and clean up the PATH to work correctly in Windows 10?

I'm imagining installing to C:\Python27 and C:\Python35, what would I do to get the proper installation and PATH.

From what I gather I should be able to run one or the other by adjusting something there so that from my CMD propmpt I'll have something like C:\Users\chrisgrazioli>python27 to run 2.7 and

C:\Users\chrisgrazioli>python to run 3.5





Gene 11/24/2016 at 10:03 pm

Everything seems to have installed properly based on your directions. Thank you!





Anthony 11/25/2016 at 7:50 am

Christopher,

The easiest option is to install both versions and change your path statements when you need to use one version or the other.

A second option, which requires more initial setup but makes life far easier, is to get familiar with setting up virtual environments. Check out virtualenv (https://virtualenv.pypa.io/en/stable/) and virtualenvwrapper (https://pypi.python.org/pypi/virtualenvwrapper/).







Christopher Grazioli 11/26/2016 at 8:59 pm

So I went ahead and downloaded the .msi for python 2.7 and 3.5. I ran 2.7 first and checked to add it to the path, then I installed 3.5 and checked to add that to the path. After install I ran a command prompt for "python" and it only runs 3.5. So I went into the C:\Python27 folder where I installed it and renamed the executable file: python.exe to python27. I thought I was home free when I typed "python27" in the command prompt and Python 2.7 fired right up, but I can't get "pip" or "pip install [any package]" to run. I get, {Fatal error in launcher:unable to create process using '"'} Anyone have any ideas on squaring this away





Nasseef 12/09/2016 at 6:52 am

I followed the steps, but still it showsnot recognized





YO 12/21/2016 at 7:55 pm

Wow thanks!





Frank Cook 12/22/2016 at 10:00 am

Hi Guys,

I have Python 27 installed and some programs work but I can't figure out how to get it read or view my windows 10 C: files, folders, and directories. Either I get an error message that the path is invalid or the shell comes up

with a blinking >>>> and no response. I've confirmed the program ran because i added print "hello" and now it will say: Hello >>>> and nothing else.. Any ideas as other things work fine like a program to open web browsers etc.





Anthony 12/22/2016 at 11:31 am

Frank,

If you post some code and the specific steps you're following, I (or other readers) can try to help.





Karen 12/22/2016 at 10:17 pm

 $C:\Python 35-32; C:\Python 35-32\Lib\site-packages\; C:\Python 35-32\Scripts\$

This is an error. There should be a \setminus for the first part C:\Python35-32 \setminus ;

After I put in the \, then it worked beautifully for me! Now on to try the PIP stuff.





Colin 12/23/2016 at 1:42 am

First rate thank you very much Anthony. I had a directory problem with Pip so I uninstalled the whole lot and followed your instructions to the letter. You have made my day.





Jonathan Crego 12/29/2016 at 2:56 am

Thank you for this. I was able to get python running ONLY after reading you guide.





Nick 01/17/2017 at 8:01 am

Thanks Anthony for taking the time to do this. Much appreciated.





Grant 01/18/2017 at 4:26 pm

Thank you for the simplistic and useful guide.



Daniel Bader: Installing Python and Pip on Windows | Adrian Tudor Web Designer and Programmer

02/25/2017 at 4:28 pm

[...] installation from the command line. If you accidentally installed Python without checking the box, follow this tutorial to add python.exe to your system [...]





Manoswini 02/27/2017 at 11:43 pm

Thanks Anthony. This discussion was quite helpful for beginners like me. Right now I have python 2. Should I go for python 3? Anyway. Thanks for this simple and clear descriptions.





Anthony 02/28/2017 at 11:18 am

Manoswini,

If you are starting out with Python, I'd suggest Python 3. It's where the language is heading, and at beginning levels there's not a vast difference between it and Python 2.

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Saad Arman 03/10/2017 at 2:08 am

★ Loading...



Abder-Rahman Ali 03/12/2017 at 11:35 am

Thanks a lot for the nice and smooth instructions.

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Naeem 03/25/2017 at 4:50 pm

Hello Im trying to install python for windows 10. I use pycharm and I configured python manually in pycharm. I want to install pygame and when I type into the cmd "python" it comes up with the not recognised message. http://imgur.com/a/ejuLg . Python is in my C: and also http://imgur.com/a/8xFjq I copied the same thing you said to do and still http://imgur.com/a/VbtLW

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Cat Cat Code Ltd 06/28/2017 at 5:58 am

[...] work, here's how to change the PATH variable on Windows 10, which I found out thanks to this article. You'll need to do this to get pip [...]





lasmine 10/30/2017 at 12:30 am

Extremely helpful. Saved my day. Thank you so much!





ute f 11/06/2017 at 11:14 am

Trying to learn python by running python 2.7.14 idle. Also trying 3.5 idle. Idle will not run. Both give same two error messages.

Socket error: an attempt was made to access a socket in a way forbidden by its access permissions

and

IDLE's subprocess didnt make connection. Either Idle cannot stat a subprocess or a personal firewall software is blocking the connection.

Have modified firewall to allow pythonw.exe both python 2.7 and 3.5. What to do next?





11te f 11/06/2017 at 11:16 am

Left out info. Trying to run Python 2.7.14 and 3.5 in Win 10 ver 1607 os build 14393.1770
Thanks





Anna Marie Smith 11/07/2017 at 7:23 pm

Very helpful. I have been happily using Python 3 on my Ubuntu Linux computers and I have been challenged but delighted with the results. Then I tried to install Python 3 on my Windows 10 laptop. First attempt was a mess. I edited, in the Environment Variables, the lower dialogue box, System Variables, and left the upper box, User Variables, unchanged. Open Command, type python at prompt, error message. Then I tried py at the prompt and there is was, the python 37 command line. But this was not really a solution. Next I downloaded Geany and tried to solve the problem by editing the Build Command dialogue box. More failures. So I uninstalled Python altogether. Then found this page, followed your instructions. I thought at first that nothing had changed, then I remembered, I need a fresh Command Prompt. Closed Command Prompt. Opened new one. My default in Command on Windows 10 is C:\Users\my.user.identity.here> This time, it responded to the full command term, python. Thanks so much





Alan Napier 12/17/2017 at 2:12 pm

I would just like to say thank you for this tutorial.

I found it faultless. Had to do a little more research but that was simply down to my own ignorance of the user variables.

It was a trouble free start to python connectivity.





Jacques Gekinet 01/07/2018 at 3:27 pm

Very important for beginners like me wanted to learn Python which don't know where to start and what to do. But with demonstration you have given to us are very helpful to learn Python. Only needed more details. Thanks to the group





Aaron 02/22/2018 at 8:04 pm

Wonderful! This made the process far easier than it was the last time I tried to make Python happen on Windows. Thank you for saving me... hours, maybe. If you had a tip jar on this blog, I'd donate.

★ Loading...



Anthony 02/22/2018 at 8:10 pm

Glad it helped! If you're interested in learning SQL, please check out my book "Practical SQL" from No Starch Press!





ratchet 03/05/2018 at 6:14 pm

thanks man...for the help..i was stuck for nearly 20 min in this





Anthony 03/05/2018 at 9:16 pm

Always glad to help!

★ Loading...



Nasri jr 04/17/2018 at 6:51 am

Thanks for help

★ Loading...



Ali 08/13/2018 at 1:28 pm

If you are interested in learning more about Python 3, check out this link: https://www.activestate.com/activepython/python-3

Or, if you want a more in depth comparison of Python 2 and Python 3, check out this link: https://www.activestate.com/blog/2017/01/python-3-vs-python-2-its-different-time





Student 08/27/2018 at 2:37 pm

Hello, thank you for the tutorial. I ran into two problems and was hoping you could help. 1) I have followed the instructions for the PATH variable but still get the "python is an invalid command" error on my command prompt. I have tried restarting it. 2) When I open the Python app directly from the start menu and try to install the packages, I get a syntax error and it points to the last letter in "install".





Anthony 08/28/2018 at 10:46 am

Hi, Student,

Unfortunately, it's difficult for me to diagnose exactly what's not working without seeing your machine. My best suggestion is to start from the beginning and work through each step to confirm you've done each one per the instructions. Typically, the error message you're seeing indicates that either Python wasn't installed or that it's not on the PATH.

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sanjay 09/28/2018 at 10:31 am

Very useful, i searched almost for 24hrs for the step to installing python 3.7 on windows 10 and its pip packages for web scraping... i got all correct and useful information here





Philip Peter Manavado 11/21/2018 at 4:55 pm

Thank you! Works Great.





Gagandeep Nagpal 12/05/2018 at 6:33 am

Great Article..

Thanks!





Abhishek 01/23/2019 at 4:47 am

Perfect article!! Thanks a lot

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Rafaelonca 03/11/2019 at 9:35 pm

Oh thanks man!

I'm having trouble with the settings because I follow a tutorial saying to put ;%PYTHON_HOME% and thats no need to do this in windows 10.

I'm newbie on windows, I've used mac for at least 10 years of my life...:p

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Dave 03/31/2019 at 2:07 pm

Having the same syntax error as other users have mentioned, e.g.

```
C:\Users\manag>python

Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 22:22:05) [MSC v.1916 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license" for more information.

>>> pip install beautifulsoup4 requests

File "", line 1

pip install beautifulsoup4 requests

^

SyntaxError: invalid syntax

>>> pip install beautifulsoup4 requests

File "", line 1

pip install beautifulsoup4 requests

^

SyntaxError: invalid syntax

>>> pip install beautifulsoup4 requests

^

SyntaxError: invalid syntax

>>>

*Loading...
```



Dave 03/31/2019 at 2:31 pm

The problem appears to be that pip was not installed with 3.7.3, e.g. checking for install showed not installed, and after installing pip (https://pip.pypa.io/en/stable/installing/),

```
> pip install beautifulsoup4 requests
...then worked fine
```

```
★ Loading...
```



Anthony 04/14/2019 at 7:04 pm

You have to make sure that you check the option to install pip during the installation. This used to be automatic but now it's a checkbox. I've modified the post to note this.





HG 05/28/2019 at 3:51 pm

Great tutorial!!! I had all the above problems, but followed a user's advice above and removed my installation and followed your instructions. All went perfect!!! The default installation to AppData did not allow my environmental variables to work properly. However, your basic installation worked perfectly. Hopefully I can now import the OS module and run my program. I am new to Python, but not new to programming although I am far from being a programmer.





Errol 06/20/2019 at 7:29 pm

Hi, Anthony. I have a Windows 10 64-bit system. Can I install the latest version of Python on this system?





Anthony 06/21/2019 at 1:56 am

Errol,

Yes you can!





Uday 08/02/2019 at 12:07 am

Thanks a lot! The most instructive how-to. Helped me.





Father of Woe 10/28/2019 at 5:02 pm

Thank-you! Great how-to. Uninstalled default – and frustrating – installation and re-installed Python following your advice. Works like a charm.





Anthony 10/30/2019 at 11:30 am

Awesome, glad to hear it worked for you!



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