Microsoft Windows [Version 10.0.22621.2134]

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C:\Users\evens>python3

Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (AMD64)] on win32

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

>>> x = [1, 2, 3]

>>> 3\*x

[1, 2, 3, 1, 2, 3, 1, 2, 3]

>>> import numpy as np

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

ModuleNotFoundError: No module named 'numpy'

>>> exit()

C:\Users\evens>pip install numpy

Collecting numpy

Obtaining dependency information for numpy from https://files.pythonhosted.org/packages/72/b2/02770e60c4e2f7e158d923ab0dea4e9f146a2dbf267fec6d8dc61d475689/numpy-1.25.2-cp311-cp311-win\_amd64.whl.metadata

Downloading numpy-1.25.2-cp311-cp311-win\_amd64.whl.metadata (5.7 kB)

Downloading numpy-1.25.2-cp311-cp311-win\_amd64.whl (15.5 MB)

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Installing collected packages: numpy

WARNING: The script f2py.exe is installed in 'C:\Users\evens\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11\_qbz5n2kfra8p0\LocalCache\local-packages\Python311\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

Successfully installed numpy-1.25.2

C:\Users\evens>

C:\Users\evens>import numpy as np

'import' is not recognized as an internal or external command,

operable program or batch file.

C:\Users\evens> import numpy as np

'import' is not recognized as an internal or external command,

operable program or batch file.

C:\Users\evens>import numpy as np

'import' is not recognized as an internal or external command,

operable program or batch file.

C:\Users\evens> immport numpy as np

'immport' is not recognized as an internal or external command,

operable program or batch file.

C:\Users\evens>python3

Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (AMD64)] on win32

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

>>> import numpy as np

>>> x

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'x' is not defined

>>> x = [1,2,3]

>>> 3\*x

[1, 2, 3, 1, 2, 3, 1, 2, 3]

>>> y = np.array([1,2,3)]

File "<stdin>", line 1

y = np.array([1,2,3)]

^

SyntaxError: closing parenthesis ')' does not match opening parenthesis '['

>>>

>>> y = np.array([1,2,3])

>>> 3\*y

array([3, 6, 9])

>>> print('this is 3y',3\*y)

this is 3y [3 6 9]

>>> import matplotlib.pyplot as plt

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

ModuleNotFoundError: No module named 'matplotlib'

>>> exit()

C:\Users\evens>install matplot.pyplot

'install' is not recognized as an internal or external command,

operable program or batch file.

C:\Users\evens>pip install matplot.pyplot

ERROR: Could not find a version that satisfies the requirement matplot.pyplot (from versions: none)

ERROR: No matching distribution found for matplot.pyplot

C:\Users\evens>pip install matplotlib

Collecting matplotlib

Obtaining dependency information for matplotlib from https://files.pythonhosted.org/packages/4d/9c/65830d4a56c47f5283eaa244dc1228c5da9c844a9f999ebcc2e69bf6cc65/matplotlib-3.7.2-cp311-cp311-win\_amd64.whl.metadata

Downloading matplotlib-3.7.2-cp311-cp311-win\_amd64.whl.metadata (5.8 kB)

Collecting contourpy>=1.0.1 (from matplotlib)

Obtaining dependency information for contourpy>=1.0.1 from https://files.pythonhosted.org/packages/16/09/989b982322439faa4bafffcd669e6f942b38fee897c2664c987bcd091dec/contourpy-1.1.0-cp311-cp311-win\_amd64.whl.metadata

Downloading contourpy-1.1.0-cp311-cp311-win\_amd64.whl.metadata (5.7 kB)

Collecting cycler>=0.10 (from matplotlib)

Downloading cycler-0.11.0-py3-none-any.whl (6.4 kB)

Collecting fonttools>=4.22.0 (from matplotlib)

Obtaining dependency information for fonttools>=4.22.0 from https://files.pythonhosted.org/packages/95/b6/9a5133deb5838c4dbe3ea27e8dba123622aa5112d43a079e9587636b4faf/fonttools-4.42.1-cp311-cp311-win\_amd64.whl.metadata

Downloading fonttools-4.42.1-cp311-cp311-win\_amd64.whl.metadata (154 kB)

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Collecting kiwisolver>=1.0.1 (from matplotlib)

Obtaining dependency information for kiwisolver>=1.0.1 from https://files.pythonhosted.org/packages/1e/37/d3c2d4ba2719059a0f12730947bbe1ad5ee8bff89e8c35319dcb2c9ddb4c/kiwisolver-1.4.5-cp311-cp311-win\_amd64.whl.metadata

Downloading kiwisolver-1.4.5-cp311-cp311-win\_amd64.whl.metadata (6.5 kB)

Requirement already satisfied: numpy>=1.20 in c:\users\evens\appdata\local\packages\pythonsoftwarefoundation.python.3.11\_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from matplotlib) (1.25.2)

Collecting packaging>=20.0 (from matplotlib)

Downloading packaging-23.1-py3-none-any.whl (48 kB)

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Collecting pillow>=6.2.0 (from matplotlib)

Obtaining dependency information for pillow>=6.2.0 from https://files.pythonhosted.org/packages/66/d4/054e491f0880bf0119ee79cdc03264e01d5732e06c454da8c69b83a7c8f2/Pillow-10.0.0-cp311-cp311-win\_amd64.whl.metadata

Downloading Pillow-10.0.0-cp311-cp311-win\_amd64.whl.metadata (9.6 kB)

Collecting pyparsing<3.1,>=2.3.1 (from matplotlib)

Downloading pyparsing-3.0.9-py3-none-any.whl (98 kB)

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Collecting python-dateutil>=2.7 (from matplotlib)

Downloading python\_dateutil-2.8.2-py2.py3-none-any.whl (247 kB)

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Collecting six>=1.5 (from python-dateutil>=2.7->matplotlib)

Downloading six-1.16.0-py2.py3-none-any.whl (11 kB)

Downloading matplotlib-3.7.2-cp311-cp311-win\_amd64.whl (7.5 MB)

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Downloading contourpy-1.1.0-cp311-cp311-win\_amd64.whl (470 kB)

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Downloading fonttools-4.42.1-cp311-cp311-win\_amd64.whl (2.1 MB)

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Downloading kiwisolver-1.4.5-cp311-cp311-win\_amd64.whl (56 kB)

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Downloading Pillow-10.0.0-cp311-cp311-win\_amd64.whl (2.5 MB)

━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 2.5/2.5 MB 7.0 MB/s eta 0:00:00

Installing collected packages: six, pyparsing, pillow, packaging, kiwisolver, fonttools, cycler, contourpy, python-dateutil, matplotlib

WARNING: The scripts fonttools.exe, pyftmerge.exe, pyftsubset.exe and ttx.exe are installed in 'C:\Users\evens\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11\_qbz5n2kfra8p0\LocalCache\local-packages\Python311\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

Successfully installed contourpy-1.1.0 cycler-0.11.0 fonttools-4.42.1 kiwisolver-1.4.5 matplotlib-3.7.2 packaging-23.1 pillow-10.0.0 pyparsing-3.0.9 python-dateutil-2.8.2 six-1.16.0

C:\Users\evens>python3

Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (AMD64)] on win32

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

>>> import matplotlib.pyplot

Matplotlib is building the font cache; this may take a moment.

>>> X = np.linspace(0, 2\*np.pi,100)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'np' is not defined

>>> import numpy as np

>>> X = np.linspace(0,2 \* np.pi, 100)

>>> Ya = npsin(x)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'npsin' is not defined

>>> Ya = np.sin(X)

>>> Yb = np.cos(X)

>>> plt.plot(X,Ya)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'plt' is not defined

>>> import matplot.pyplot as plt

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

ModuleNotFoundError: No module named 'matplot'

>>> import matplot.pyplot as plt

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

ModuleNotFoundError: No module named 'matplot'

>>> import matplotlib.pyplot as plt

>>> plt.plot(X, Ya)

[<matplotlib.lines.Line2D object at 0x000001E47C00EBD0>]

>>> plt.plot(X,Yb)

[<matplotlib.lines.Line2D object at 0x000001E47C01E010>]

>>> plt.show

<function show at 0x000001E479D8C540>

>>> plt.show()

>>> plt.xlabel('x')

Text(0.5, 0, 'x')

>>> plt.ylabel('y')

Text(0, 0.5, 'y')

>>> plt.show()

>>> x = np.linspace(0, 100,1)

>>> x

array([0.])

>>> x\*10

array([0.])

>>> x = np.linspace(0,1,100)

>>> x

array([0. , 0.01010101, 0.02020202, 0.03030303, 0.04040404,

0.05050505, 0.06060606, 0.07070707, 0.08080808, 0.09090909,

0.1010101 , 0.11111111, 0.12121212, 0.13131313, 0.14141414,

0.15151515, 0.16161616, 0.17171717, 0.18181818, 0.19191919,

0.2020202 , 0.21212121, 0.22222222, 0.23232323, 0.24242424,

0.25252525, 0.26262626, 0.27272727, 0.28282828, 0.29292929,

0.3030303 , 0.31313131, 0.32323232, 0.33333333, 0.34343434,

0.35353535, 0.36363636, 0.37373737, 0.38383838, 0.39393939,

0.4040404 , 0.41414141, 0.42424242, 0.43434343, 0.44444444,

0.45454545, 0.46464646, 0.47474747, 0.48484848, 0.49494949,

0.50505051, 0.51515152, 0.52525253, 0.53535354, 0.54545455,

0.55555556, 0.56565657, 0.57575758, 0.58585859, 0.5959596 ,

0.60606061, 0.61616162, 0.62626263, 0.63636364, 0.64646465,

0.65656566, 0.66666667, 0.67676768, 0.68686869, 0.6969697 ,

0.70707071, 0.71717172, 0.72727273, 0.73737374, 0.74747475,

0.75757576, 0.76767677, 0.77777778, 0.78787879, 0.7979798 ,

0.80808081, 0.81818182, 0.82828283, 0.83838384, 0.84848485,

0.85858586, 0.86868687, 0.87878788, 0.88888889, 0.8989899 ,

0.90909091, 0.91919192, 0.92929293, 0.93939394, 0.94949495,

0.95959596, 0.96969697, 0.97979798, 0.98989899, 1. ])

>>> 10\*x

array([ 0. , 0.1010101 , 0.2020202 , 0.3030303 , 0.4040404 ,

0.50505051, 0.60606061, 0.70707071, 0.80808081, 0.90909091,

1.01010101, 1.11111111, 1.21212121, 1.31313131, 1.41414141,

1.51515152, 1.61616162, 1.71717172, 1.81818182, 1.91919192,

2.02020202, 2.12121212, 2.22222222, 2.32323232, 2.42424242,

2.52525253, 2.62626263, 2.72727273, 2.82828283, 2.92929293,

3.03030303, 3.13131313, 3.23232323, 3.33333333, 3.43434343,

3.53535354, 3.63636364, 3.73737374, 3.83838384, 3.93939394,

4.04040404, 4.14141414, 4.24242424, 4.34343434, 4.44444444,

4.54545455, 4.64646465, 4.74747475, 4.84848485, 4.94949495,

5.05050505, 5.15151515, 5.25252525, 5.35353535, 5.45454545,

5.55555556, 5.65656566, 5.75757576, 5.85858586, 5.95959596,

6.06060606, 6.16161616, 6.26262626, 6.36363636, 6.46464646,

6.56565657, 6.66666667, 6.76767677, 6.86868687, 6.96969697,

7.07070707, 7.17171717, 7.27272727, 7.37373737, 7.47474747,

7.57575758, 7.67676768, 7.77777778, 7.87878788, 7.97979798,

8.08080808, 8.18181818, 8.28282828, 8.38383838, 8.48484848,

8.58585859, 8.68686869, 8.78787879, 8.88888889, 8.98989899,

9.09090909, 9.19191919, 9.29292929, 9.39393939, 9.49494949,

9.5959596 , 9.6969697 , 9.7979798 , 9.8989899 , 10. ])

>>> y = np.arrange(0,100,1)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

File "C:\Users\evens\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11\_qbz5n2kfra8p0\LocalCache\local-packages\Python311\site-packages\numpy\\_\_init\_\_.py", line 328, in \_\_getattr\_\_

raise AttributeError("module {!r} has no attribute "

AttributeError: module 'numpy' has no attribute 'arrange'. Did you mean: 'arange'?

>>> y = np.arange(0,100,1)

>>> Y

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'Y' is not defined. Did you mean: 'y'?

>>> y

array([ 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,

17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33,

34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50,

51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67,

68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84,

85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99])

>>> size(x)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'size' is not defined. Did you mean: 'slice'?

>>> a = np.size(x)

>>> a

100

>>> b = np.size(y)

>>> b

100

>>> a = x(0,1,2)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

TypeError: 'numpy.ndarray' object is not callable

>>> a = x[0,1,2]

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

IndexError: too many indices for array: array is 1-dimensional, but 3 were indexed

>>> print x[0:2]

File "<stdin>", line 1

print x[0:2]

^^^^^^^^^^^^

SyntaxError: Missing parentheses in call to 'print'. Did you mean print(...)?

>>> print(x[0:2])

[0. 0.01010101]

>>> print(x[0:5])

[0. 0.01010101 0.02020202 0.03030303 0.04040404]

>>> print('the first three entries of x are' x[0:4])

File "<stdin>", line 1

print('the first three entries of x are' x[0:4])

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

SyntaxError: invalid syntax. Perhaps you forgot a comma?

>>> print('the first three entries of x are', x[0:4])

the first three entries of x are [0. 0.01010101 0.02020202 0.03030303]

>>> w = 10\*\*(-np.linspace(1,10,10))

>>> w

array([1.e-01, 1.e-02, 1.e-03, 1.e-04, 1.e-05, 1.e-06, 1.e-07, 1.e-08,

1.e-09, 1.e-10])

>>> zz = np.length(w)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

File "C:\Users\evens\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11\_qbz5n2kfra8p0\LocalCache\local-packages\Python311\site-packages\numpy\\_\_init\_\_.py", line 328, in \_\_getattr\_\_

raise AttributeError("module {!r} has no attribute "

AttributeError: module 'numpy' has no attribute 'length'

>>> zz = np.len(w)

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

File "C:\Users\evens\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11\_qbz5n2kfra8p0\LocalCache\local-packages\Python311\site-packages\numpy\\_\_init\_\_.py", line 328, in \_\_getattr\_\_

raise AttributeError("module {!r} has no attribute "

AttributeError: module 'numpy' has no attribute 'len'

>>> zz

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'zz' is not defined

>>> len(w)

10

>>> x = linspace(0,len(w))

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

NameError: name 'linspace' is not defined

>>> x = np.linspace(0,len(w))

>>> x

array([ 0. , 0.20408163, 0.40816327, 0.6122449 , 0.81632653,

1.02040816, 1.2244898 , 1.42857143, 1.63265306, 1.83673469,

2.04081633, 2.24489796, 2.44897959, 2.65306122, 2.85714286,

3.06122449, 3.26530612, 3.46938776, 3.67346939, 3.87755102,

4.08163265, 4.28571429, 4.48979592, 4.69387755, 4.89795918,

5.10204082, 5.30612245, 5.51020408, 5.71428571, 5.91836735,

6.12244898, 6.32653061, 6.53061224, 6.73469388, 6.93877551,

7.14285714, 7.34693878, 7.55102041, 7.75510204, 7.95918367,

8.16326531, 8.36734694, 8.57142857, 8.7755102 , 8.97959184,

9.18367347, 9.3877551 , 9.59183673, 9.79591837, 10. ])

>>> x = np.arange(0,len(w))

>>> x

array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9])

>>> exit()

C:\Users\evens>