

## Task 1

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
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C:\Users\Qiang>conda info
Current conda install:

      platform : win-64
      conda version : 4.3.24
      conda is private : False
      conda-env version : 4.3.24
      conda-build version : not installed
      python version : 3.6.1.final.0
      requests version : 2.14.2
      root environment : C:\Users\Qiang\Anaconda3 (writable)
      default environment : C:\Users\Qiang\Anaconda3
      envs directories : C:\Users\Qiang\Anaconda3\envs
                        C:\Users\Qiang\AppData\Local\conda\conda\envs
                        C:\Users\Qiang\.conda\envs
      package cache : C:\Users\Qiang\Anaconda3\pkgs
                     C:\Users\Qiang\AppData\Local\conda\conda\pkgs
      channel URLs : https://conda.anaconda.org/anaconda-fusion/win-64
                    https://conda.anaconda.org/anaconda-fusion/noarch
                    https://repo.continuum.io/pkgs/free/win-64
                    https://repo.continuum.io/pkgs/free/noarch
                    https://repo.continuum.io/pkgs/r/win-64
                    https://repo.continuum.io/pkgs/r/noarch
                    https://repo.continuum.io/pkgs/pro/win-64
                    https://repo.continuum.io/pkgs/pro/noarch
                    https://repo.continuum.io/pkgs/msys2/win-64
                    https://repo.continuum.io/pkgs/msys2/noarch
      config file : C:\Users\Qiang\.condarc
      netrc file : None
      offline mode : False
      user-agent : conda/4.3.24 requests/2.14.2 CPython/3.6.1 Windows/7 W
indows/6.1.7601
      administrator : False

C:\Users\Qiang>
```

## Task 2

```
IPython: C:\Anaconda3\Scripts
? -> Introduction and overview of IPython's features.
quickref -> Quick reference.
help -> Python's own help system.
object? -> Details about 'object', use 'object??' for extra details.

In [1]: import numpy as np
In [2]: import scipy.linalg
In [3]: a = np.array([[1,2,3,4,5],[6,7,8,9,10]])
In [4]: print(a.ndim)
2
In [5]: print(a.size)
10
In [6]: print(a.shape)
(2, 5)
In [7]: print(a.shape[1])
5
In [8]: a[-1]
Out[8]: array([ 6,  7,  8,  9, 10])
In [9]: print(a[-1])
[ 6  7  8  9 10]
In [10]: print(a[1,1])
7
In [11]: print(a[1][1:3])
[7 8]

In [14]: print(a.T)
[[ 1  6]
 [ 2  7]
 [ 3  8]
 [ 4  9]
 [ 5 10]]

In [15]: print(a.conj().T)
[[ 1  6]
 [ 2  7]
 [ 3  8]
 [ 4  9]
 [ 5 10]]

In [16]: print(a*3)
[[ 3  6  9 12 15]
 [18 21 24 27 30]]

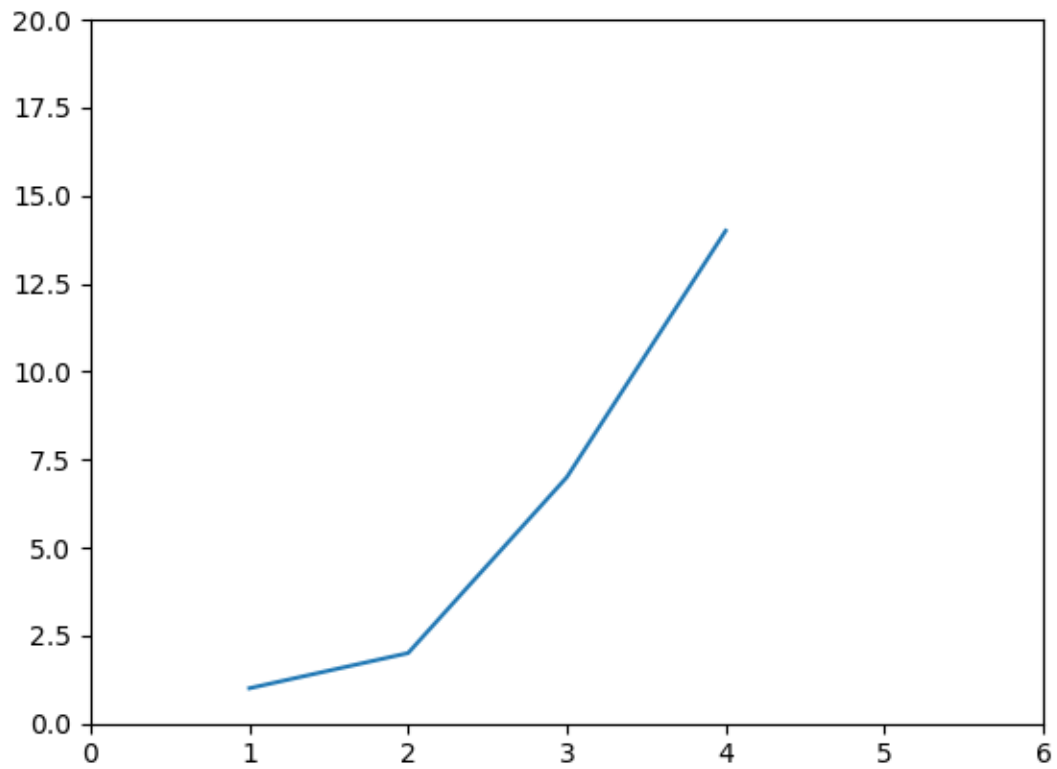
In [17]: print(a/3)
[[ 0.33333333  0.66666667  1.  1.33333333  1.66666667]
 [ 2.  2.33333333  2.66666667  3.  3.33333333]]

In [18]: print(a**3)
[[ 1  8 27 64 125]
 [216 343 512 729 1000]]

In [19]: print(a>3)
[[False False False  True  True]
 [ True  True  True  True  True]]
```

#### Task 4

```
import matplotlib.pyplot as plt  
plt.plot([1,2,3,4],[1,2,7,14])  
plt.axis([0,6,0,20])  
plt.show()
```



## Task 5

The screenshot shows a GitHub profile page for the user 'xxxxqia'. The header includes the GitHub logo, a search bar, and navigation links for Pull requests, Issues, Marketplace, and Explore. The user's profile is on the left, featuring a green and white avatar, the username 'xxxxqia', and an 'Add a bio' link. A 'ProTip!' banner at the top right encourages updating the profile. The main content area shows the user's statistics: Overview (selected), Repositories (1), Stars (0), Followers (0), and Following (0). Below this, the 'Popular repositories' section lists 'hello-world' as the first repository. The '6 contributions in the last year' section displays a calendar grid with a single green square indicating a contribution on Wednesday, March 1st. The 'Contribution activity' section shows a timeline with a jump to 2017 button, indicating activity from April to September 2017. A specific activity entry for March 2017 shows 'Created 3 commits in 1 repository' for the repository 'xxxxqia/hello-world'.

Signed in as xxxxqia

- Your profile
- Your stars
- Your Gists
- Help
- Settings
- Sign out

ProTip! Updating your profile with your name, location, and a profile picture helps other GitHub users get to know you.

Overview Repositories 1 Stars 0 Followers 0 Following 0

Popular repositories

hello-world  
First Repository

6 contributions in the last year Contribution settings

Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug

Mon  
Wed  
Fri

Learn how we count contributions.

Less More

Contribution activity Jump to 2017

April - September 2017

xxxxqia has no activity yet for this period.

March 2017

Created 3 commits in 1 repository  
xxxxqia/hello-world 3 commits

## Task 6

<https://github.com/xxxxqia/COMP576>