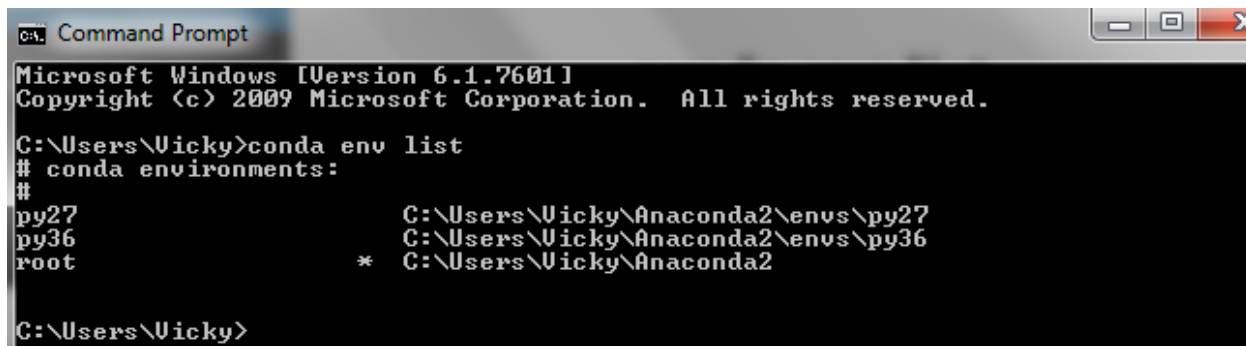


Step 1: List all your environment in conda, find out the name of python3.6 environment. In my case, it is called “py36”, but you may have a different name on your system.

Use command: conda env list



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

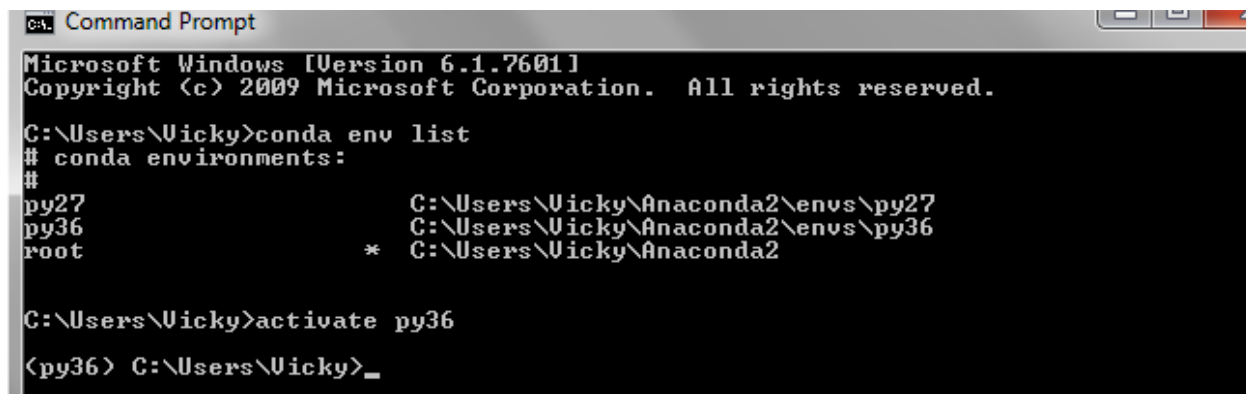
C:\Users\Vicky>conda env list
# conda environments:
#
py27             C:\Users\Vicky\Anaconda2\envs\py27
py36             C:\Users\Vicky\Anaconda2\envs\py36
root             * C:\Users\Vicky\Anaconda2

C:\Users\Vicky>
```

Step 2: activate your python 3.6 environment in conda.

Use command: activate [name of python3.6 environment]

(For mac user, use command: source activate [name of python3.6 environment])



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

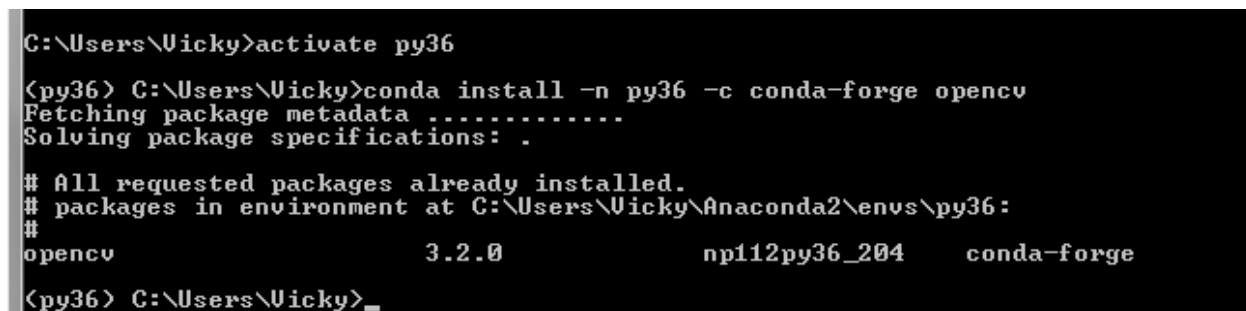
C:\Users\Vicky>conda env list
# conda environments:
#
py27             C:\Users\Vicky\Anaconda2\envs\py27
py36             C:\Users\Vicky\Anaconda2\envs\py36
root             * C:\Users\Vicky\Anaconda2

C:\Users\Vicky>activate py36
<py36> C:\Users\Vicky>_

C:\Users\Vicky>
```

Step 3: install opencv in python 3.6. Follow the instruction on screen to install. (I already have mine installed, the screen showed different message.)

Use command: conda install -n [name of python3.6 environment] -c conda-forge opencv



```
C:\Users\Vicky>activate py36
<py36> C:\Users\Vicky>conda install -n py36 -c conda-forge opencv
Fetching package metadata .....
Solving package specifications: .

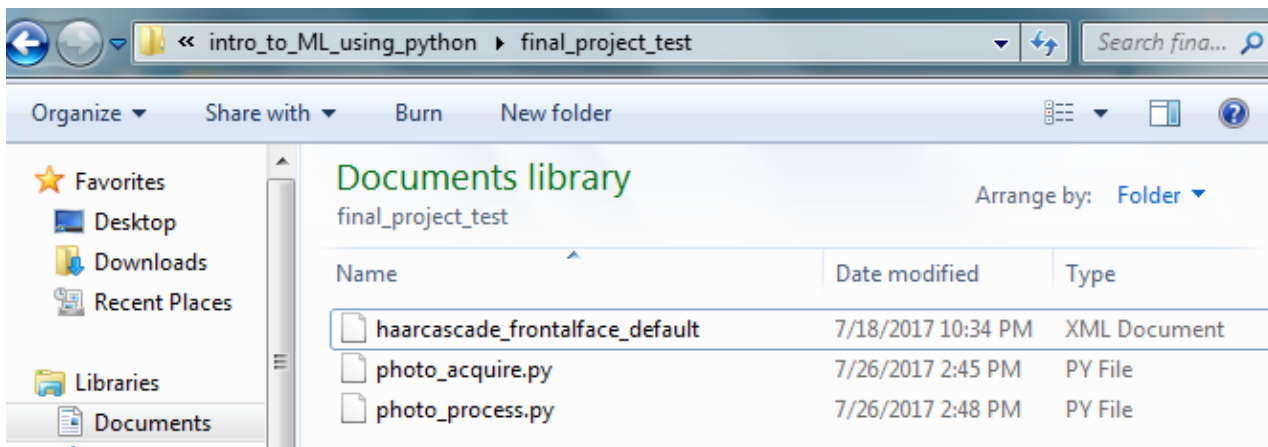
# All requested packages already installed.
# packages in environment at C:\Users\Vicky\Anaconda2\envs\py36:
#
opencv             3.2.0             np112py36_204     conda-forge

<py36> C:\Users\Vicky>_
```

Step 4:

Create a new folder called “final_project_test” on your computer. Copy the following 3 documents in that folder.

You can find them in the face_recog folder in group files on Canvas.



Step 5:

Change your working directory to “final_project_test”

Use command: `cd C:\Users\Vicky\Documents\berkeley_ext_course\intro_to_ML_using_python\final_project_test`

```
<py36> C:\Users\Vicky>cd C:\Users\Vicky\Documents\berkeley_ext_course\intro_to_ML_using_python\final_project_test
<py36> C:\Users\Vicky\Documents\berkeley_ext_course\intro_to_ML_using_python\final_project_test>
```

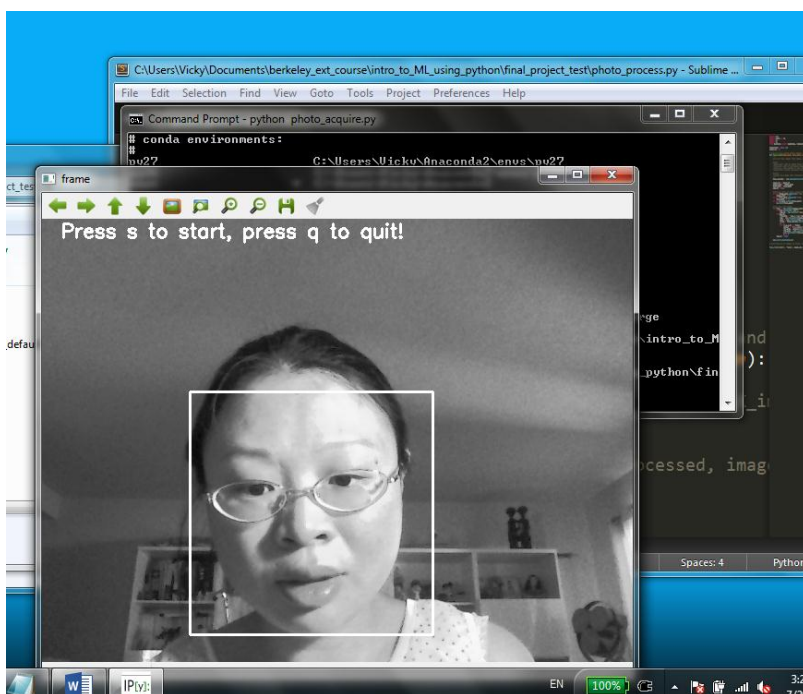
Step 6:

Run `photo_acquire.py`

Use command: `python photo_acquire.py`

```
<py36> C:\Users\Vicky\Documents\berkeley_ext_course\intro_to_ML_using_python\final_project_test>python photo_acquire.py
init done
```

A window will pop up like below:



Step 7:

Press “s” button to start image capture, make sure your face is within the white box. Press “s” several time until you see the message on the screen changed to “capture image X...” Please change your face expression or move head around during capturing to obtain various face images.



Once capture is finished. You will see a folder called “photo” in your working directory.

Name	Date modified	Type
photo	7/26/2017 3:26 PM	File folder
haarcascade_frontalface_default	7/18/2017 10:34 PM	XML Document
photo_acquire.py	7/26/2017 2:45 PM	PY File
photo_process.py	7/26/2017 2:48 PM	PY File

The number of photos to take can be changed in photo_acquire.py

Change n. Current setting: n=100 (100 photos)

```
photo_process.py x photo_acquire.py x
1 import cv2
2 import numpy as np
3 import os
4 import re
5 from datetime import datetime, timedelta
6
7 image_path = 'photo'
8 n = 100
9 start_id = 0
10
11 # take a series of images within video
12 def image_capture(image_path, n, start_id):
```

Step 8:

After you acquire the photo, change class_id in photo_process.py. Everyone will use a unique number as follows:

Priyanka Deo	0
Weiya Jiang	1
Nicolas Loffreda	2
Krupa Masilamani	3
Mukul Sharma	4
Laura Ye	5

```
photo_process.py x
1 import cv2
2 import numpy as np
3 import os
4 import re
5 from datetime import datetime, timedelta
6
7 resolution = (50, 50)
8 class_id = 0
9
10 # crop out face region within images, resize to 100x100 and
11 def face_crop(image_path, face_path, class_id, resolution):
```

Step 9:

Process images.

Use command: python photo_process.py

Name	Date modified	Type
faces	7/26/2017 3:38 PM	File folder
photo	7/26/2017 3:26 PM	File folder
haarcascade_frontalface_default	7/18/2017 10:34 PM	XML Document
photo_acquire.py	7/26/2017 3:31 PM	PY File
photo_process.py	7/26/2017 2:48 PM	PY File

A folder named “faces” should appear in your working directory. Check the images in “faces” folder, make sure it contains faces correctly. And please upload face images to Canvas.