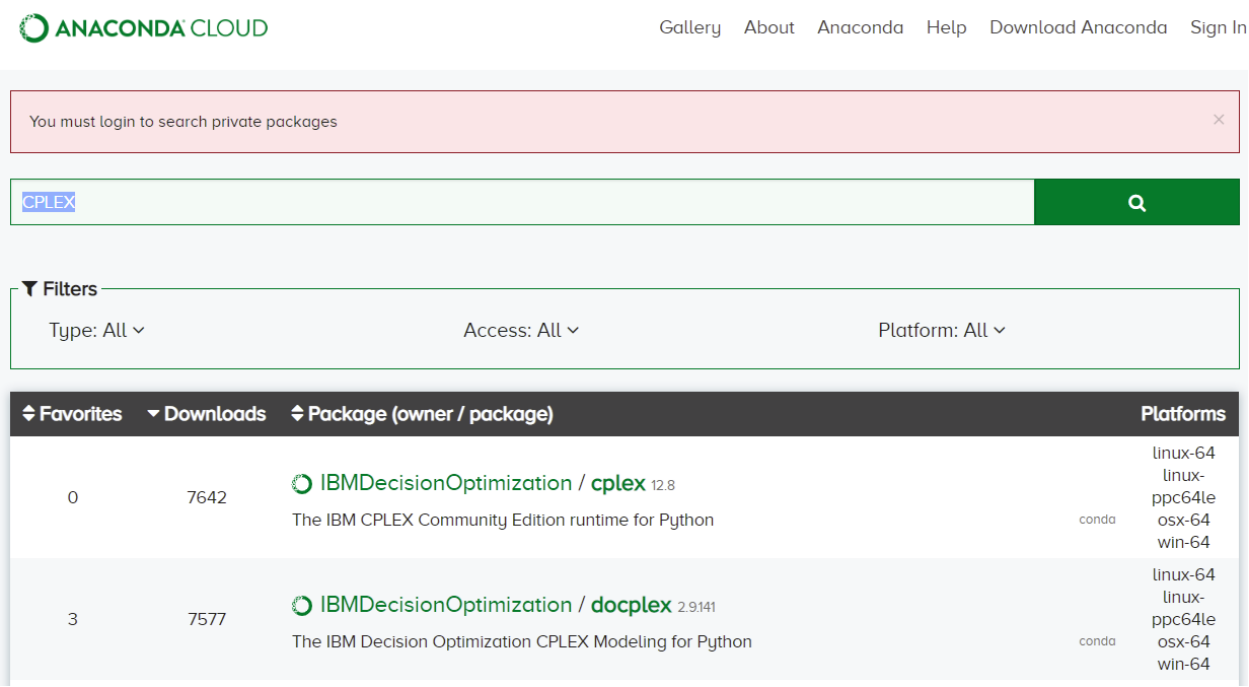
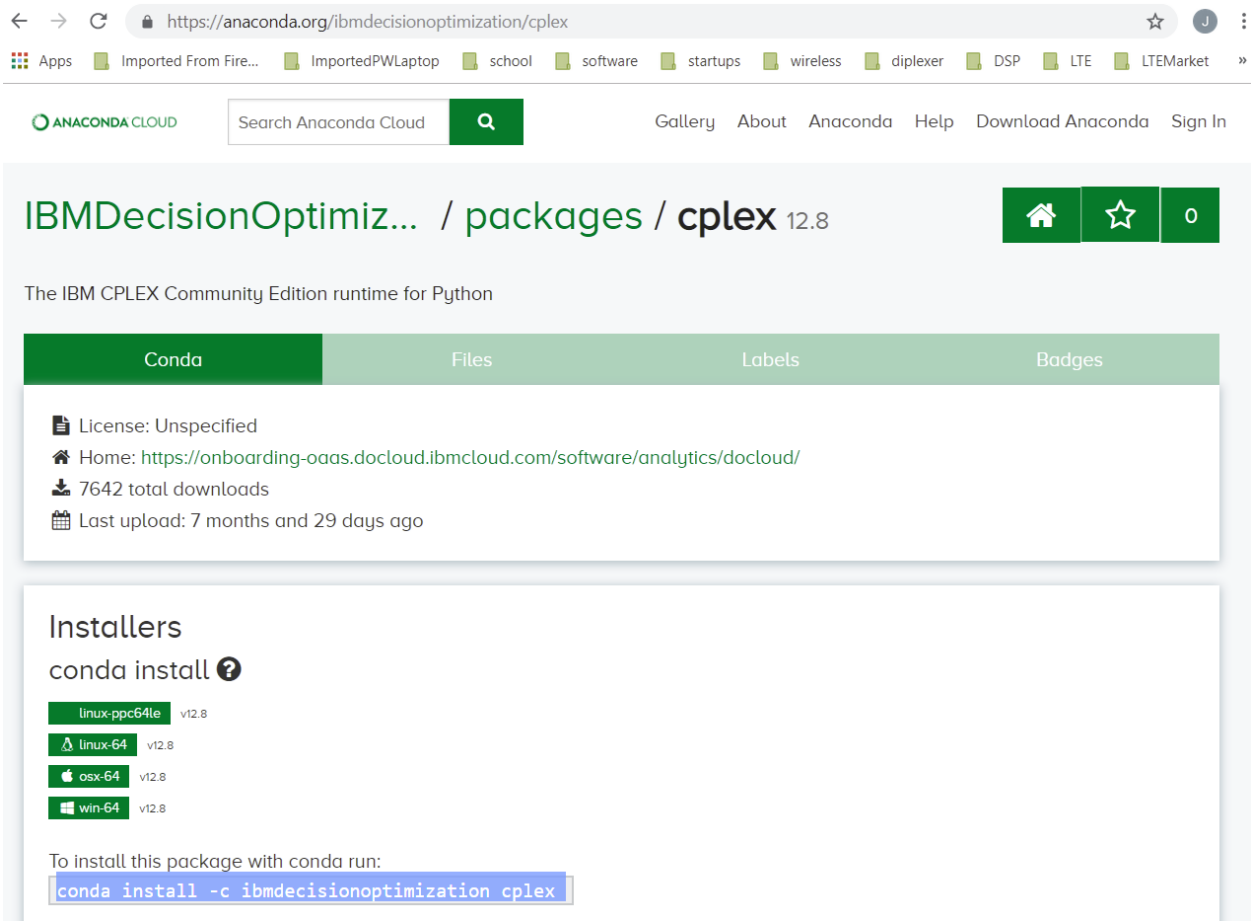
How to install optimization libraries for Python 3.7:

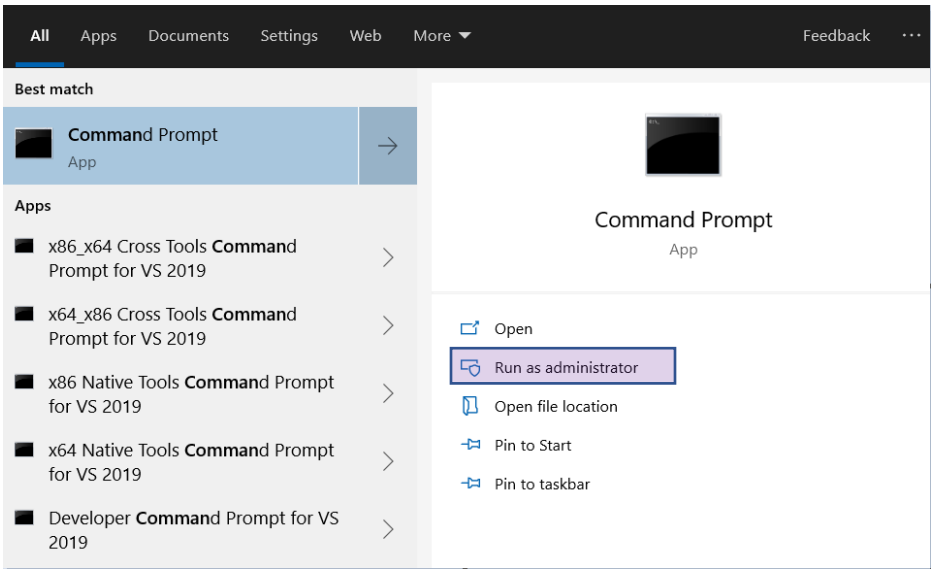
1. Go to [www.anaconda.org](http://www.anaconda.org) and type cplex in the search window.
2. You will get to the following page:




3. You can choose either one. Click on the **cplex** to get to the page where the command for download and installation is displayed.




4. Copy and paste this command into a text editor and save it.
5. Open a terminal (on Macs) or command Prompt (Windows) with administrative privileges



6. Use conda command to make a new environment called optimization (or any name you wish to call your optimization environment). For conda cheat sheet please refer to the following link:

   https://docs.conda.io/projects/conda/en/latest/_downloads/1f5ecf5a87b1c1a8aaf5a7ab8a7a0ff7/conda-cheatsheet.pdf

   ```
   conda create -n optimization python=3 pip
   ```

   *It is important to include pip at the end of the command to install pip within the new environment otherwise your installation of libraries in the new environment could impact the base environment of Python.

7. Check a list of your environments then activate your optimization environment

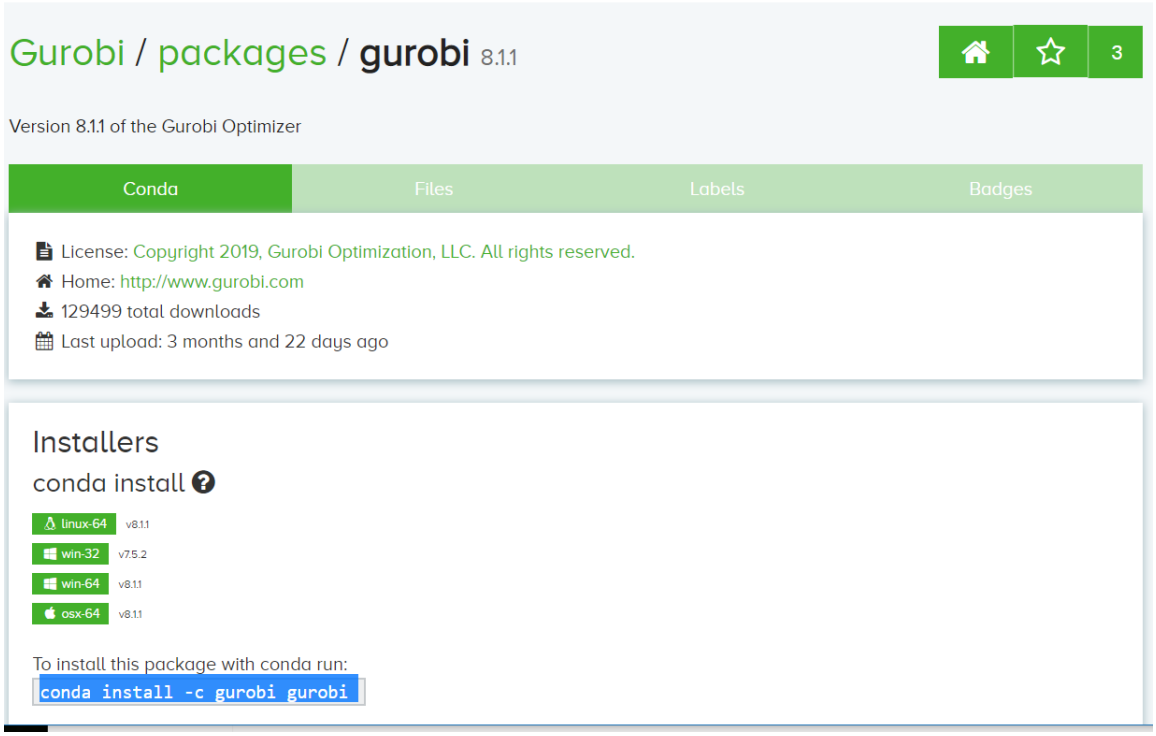
   ```
   conda env list  (to get the list of your current environments. The new environment should appear in the list)

   conda activate optimization (to activate optimization environment)
   ```

8. You can now install the cplex and other optimization packages in this newly created environment. (use the command you copied into the text editor to install the module)

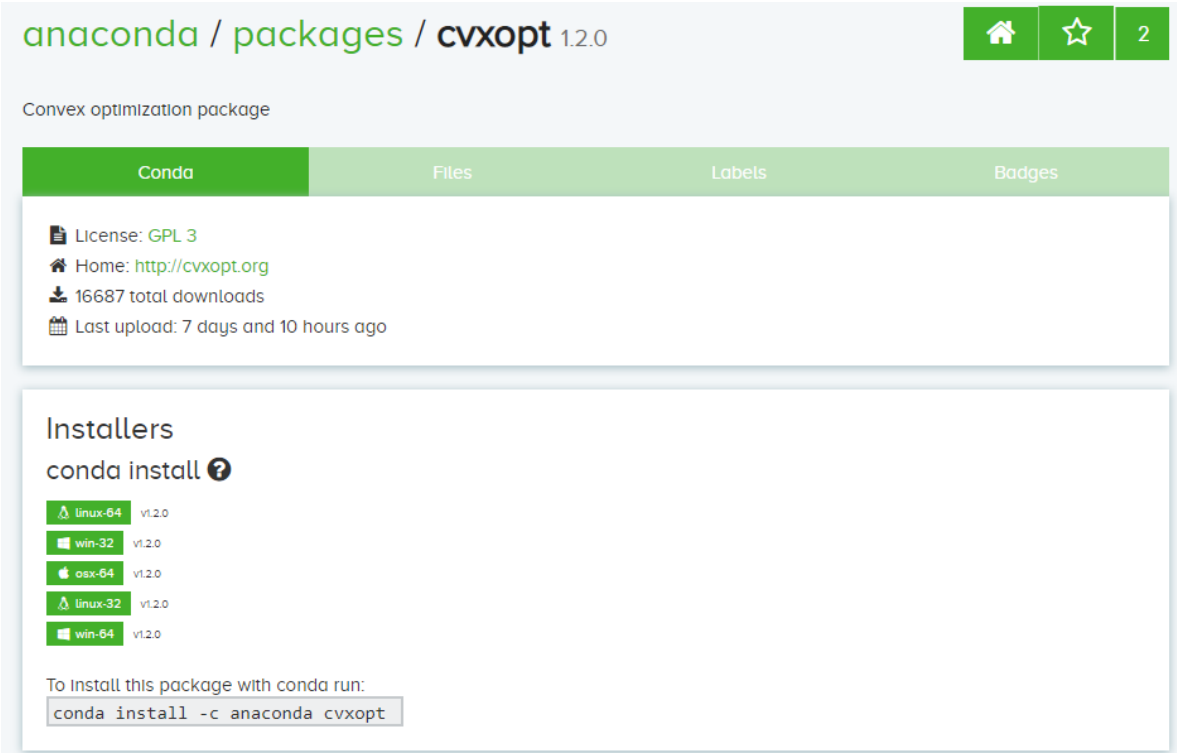
   ```
   conda install -c ibmdecisionoptimization cplex
   ```

9. Install the following libraries in the optimization environment:

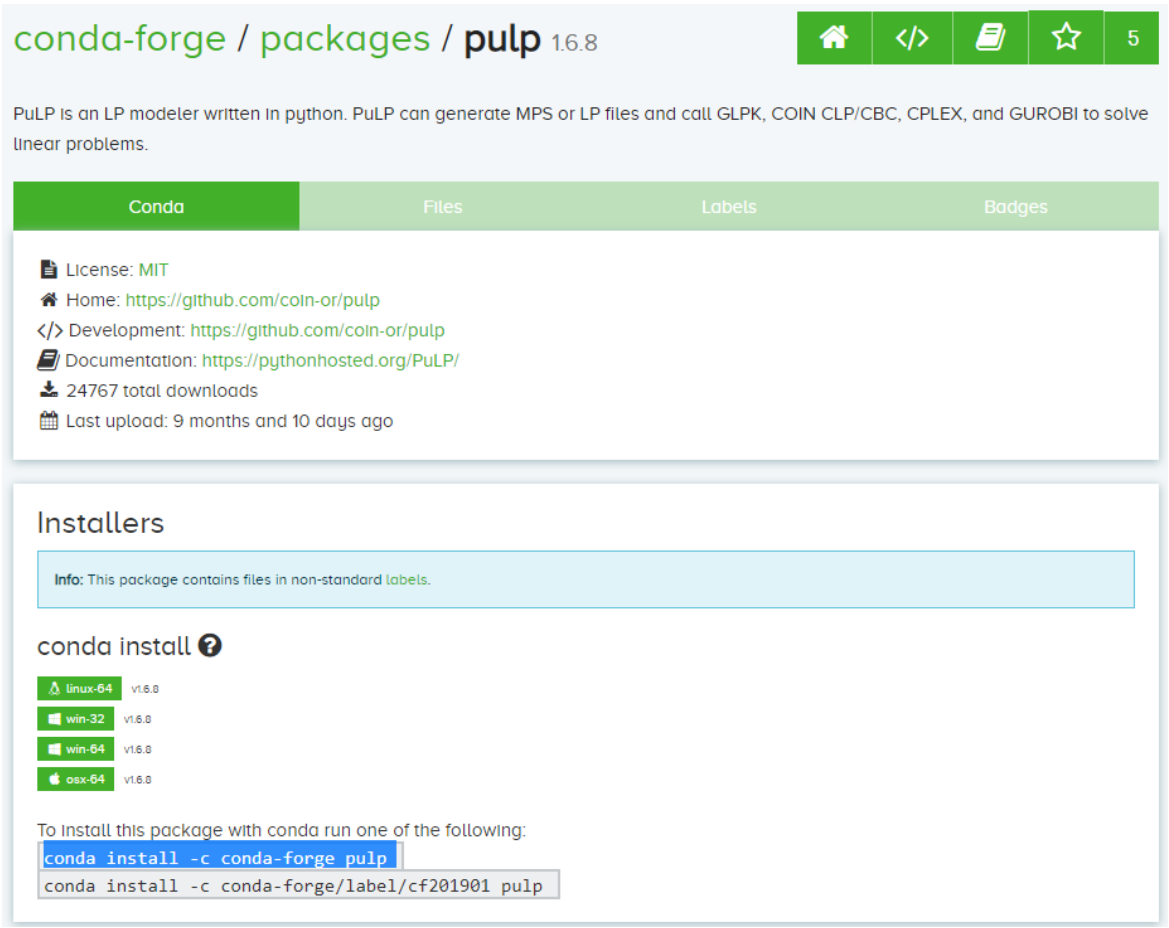
   ```
   conda install -c gurobi gurobi
   ```



```
conda install -c anaconda cvxopt
```



```
conda install -c conda-forge pulp
```




These are the key optimization libraries we will need for this course, however, if you want to try other libraries/packages the process is the same. First find the package on Anacond.org and look for the installation commands on the corresponding page.