In [1]:
```
from IPython.display import HTML
HTML("""
<br><br>
<a href=http://wwwgong.pythonanywhere.com/cuspea/default/list_talks target=new>
<font size=+3 color=blue>CUSPEA Talks</font>
</a>
<br><br>
<img src=../images/open-source-learning.jpg><br>
""")
```

Out[1]:

CUSPEA Talks

(http://wwwgong.pythonanywhere.com/cuspea/default/list_talks)

In [ ]:

Fun with MyPETS

Table of Contents

Motivation

- Current Choice

- A New Option

> The **Jupyter Notebook** is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and explanatory text. Uses include: data cleaning and transformation, numerical simulation, statistical modeling, machine learning and much more.

Useful for many tasks

- Programming
- Blogging
- Learning
- Research
- Documenting work
- Collaborating
- Communicating

- Publishing results

or even

- Doing homework as a student

In [2]:
```
HTML("<img src=../images/office-suite.jpg>")
```

Out[2]:

	Name	Description	Alternative
2	PowerPoint	Presentation app - part of MS Office suite	Jupyter Notebook
3	Word	Text processing app - part of MS Office suite	Jupyter Notebook
4	Excel	Spreadsheet app - calculation, graphing, table, VBA macro	Jupyter Notebook
5	Access	simple database	Jupyter Notebook
6	OneNote	free-form information gathering and multi-user collaboration	Jupyter Notebook
7	Communicator	Part of Skype for Business with basic features - instant messaging, VoIP, video conferencing	wechat, whatsapp, skype, zoom
8	Outlook	personal information manager for email, calendar, tasks, contacts, journal	gMail
9	Publisher	desktop publishing app	
10	InfoPath	(discontinued) app for designing, distributing, filling and submitting electronic forms containing structured data	

Introduction

Problem Statement

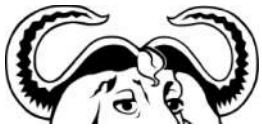
Import packages

In [3]:
```
# math function
import math

# create np array
import numpy as np

# pandas for data analysis
import pandas as pd

# plotting
import matplotlib.pyplot as plt
%matplotlib inline

# symbolic math
import sympy as sy

# html5
from IPython.display import HTML, SVG, YouTubeVideo

# widgets
from collections import OrderedDict
from IPython.display import display, clear_output
from ipywidgets import Dropdown

# csv file
import csv
```

History of Open Source Movement

In [4]:
```
with open('../dataset/open_src_move_v2_1.csv') as csvfile:
    reader = csv.DictReader(csvfile)
    table_str = '<table>'
    table_row = """
    <tr><td>{year}</td>
        <td><img src={picture}></td>
        <td><table>
            <tr><td>{person}</td></tr>
            <tr><td><a target=new href={subject_url}>{subject}</a></td></tr>
            <tr><td>{history}</td></tr>
            </table>
        </td>
    </tr>
    """
    for row in reader:
        table_str = table_str + table_row.format(year=row['Year'], \
                subject=row['Subject'],\
                subject_url=row['SubjectURL'],\
                person=row['Person'],\
                picture=row['Picture'],\
                history=row['History'])
    table_str = table_str + '</table>'

HTML(table_str)
```

Out[4]:

1983		Richard Stallman GNU Project : gcc, Emacs, gdb (https://en.wikipedia.org/wiki/GNU_Project) Launch of the free software movement and founder of Free Software Foundation
1984		X.Org X Window Systerm (https://en.wikipedia.org/wiki/X_Window_System) basic framework for a GUI environment
1985		Richard Stallman GNU Manifesto: GNU's Not Unix (https://en.wikipedia.org/wiki/GNU_Manifesto)

How to learn STEM

In [5]:
```
HTML("Wen calls it -<br><br><br> <font color=red size=+4>M</font><font color=purp
```

Out[5]: Wen calls it -

MyPETs

Math

- Awesome Math (https://github.com/rossant/awesome-math)

$$e^{i\pi} + 1 = 0$$

see more MathJax (https://www.mathjax.org/) equations here (https://jupyter-notebook.readthedocs.io/en/latest/examples/Notebook/Typesetting%20Equations.html#Maxwell's-Equations)

Science

Physics

- Computational Physics, 3rd Ed - Problem Solving with Python by Rubin Landau (http://physics.oregonstate.edu/~landaur/Books/CPbook/index.html)

Engineering

- How To Be A Programmer (https://github.com/braydie/HowToBeAProgrammer)

Technology

- Deep Learning for Self-Driving Cars (http://selfdrivingcars.mit.edu/) @MIT
- Deep Learning for Natural Language Processing (http://cs224d.stanford.edu/) @Stanford

References

Websites

- DataCamp - Jupyter Notebook Tutorial

(https://www.datacamp.com/community/tutorials/tutorial-jupyter-notebook#gs.ClmI4Jc)

- http://docs.python.org (http://docs.python.org)

It goes without saying that Pythonâ€™s own online documentation is an excellent resource if you need to delve into the finer details of the language and modules. Just make sure youâ€™re looking at the documentation for Python 3 and not earlier versions.

Books

Other Resources

- Idea
  - Google Search (http://www.google.com)
- Text
  - Wikipedia (https://www.wikipedia.org/)
- Image
  - Google Images (https://www.google.com/imghp)
- Video
  - YouTube (https://www.youtube.com/)

Contributors

- wen.gong@oracle.com (first created on 2017-03-09)

Appendix

In [ ]:

In [ ]: