--- xml1.py

```
import xml.etree.ElementTree as ET

data = '''
<person>
  <name>Chuck</name>
  <phone type="intl">
     +1 734 303 4456
   </phone>
   <email hide="yes"/>
</person>'''

tree = ET.fromstring(data)
print 'Name:',tree.find('name').text
print 'Attr:',tree.find('email').get('hide')
```

--- xml2.py

```
import xml.etree.ElementTree as ET

input = '''
<stuff>
    <users>
        <user x="2">
            <id>001</id>
            <name>Chuck</name>
        </user>
        <user x="7">
            <id>009</id>
            <name>Brent</name>
            </user>
        </users>
</stuff>'''

stuff = ET.fromstring(input)
lst = stuff.findall('users/user')
print 'User count:', len(lst)

for item in lst:
    print 'Name', item.find('name').text
    print 'Id', item.find('id').text
    print 'Attribute', item.get("x")
```

--- json1.py

```
import json

data = '''
{
  "name" : "Chuck",
  "phone" : {
    "type" : "intl",
    "number" : "+1 734 303 4456"
   },
   "email" : {
     "hide" : "yes"
   }
}'''

info = json.loads(data)
print 'Name:',info["name"]
print 'Hide:',info["email"]["hide"]
```

--- json2.py

```
import json

input = '''
[
  { "id" : "001",
    "x" : "2",
    "name" : "Chuck"
  } ,
  { "id" : "009",
    "x" : "7",
    "name" : "Chuck"
  }
]'''

info = json.loads(input)
print 'User count:', len(info)

for item in info:
    print 'Name', item['name']
    print 'Id', item['id']
    print 'Attribute', item['x']
```

--- geojson.py

```
import urllib
import json

serviceurl = 'http://maps.googleapis.com/maps/api/geocode/json?'

while True:
    address = raw_input('Enter location: ')
    if len(address) < 1 : break

    url = serviceurl + urllib.urlencode({'sensor':'false',
          'address': address})
    print 'Retrieving', url
    uh = urllib.urlopen(url)
    data = uh.read()
    print 'Retrieved',len(data),'characters'

    try: js = json.loads(str(data))
    except: js = None
    if 'status' not in js or js['status'] != 'OK':
        print '==== Failure To Retrieve ===='
        print data
        continue

    print json.dumps(js, indent=4)

    lat = js["results"][0]["geometry"]["location"]["lat"]
    lng = js["results"][0]["geometry"]["location"]["lng"]
    print 'lat',lat,'lng',lng
    location = js['results'][0]['formatted_address']
    print location
```

--- Program output

```
Enter location: Ann Arbor, MI
Retrieving http://maps.googleapis.com/...
Retrieved 1669 characters
lat 42.2808256 lng -83.7430378
Ann Arbor, MI, USA
Enter location:
```

--- hidden.py

```
def oauth() :
    return { "consumer_key" : "h7Lu...Ng",
        "consumer_secret" : "dNKenAC3New...mmn7Q",
        "token_key" : "10185562-ein2...P4GEQQOSGI",
        "token_secret" : "H0ycCFemmwyf1...qoIpBo" }
```

--- Augmented URL

```
https://api.twitter.com/1.1/statuses
/user_timeline.json?count=2
&oauth_version=1.0&oauth_token=101...SGI
&screen_name=drchuck&oauth_nonce=09239679
&oauth_timestamp=1380395644
&oauth_signature=rLK...BoD
&oauth_consumer_key=h7Lu...GNg
&oauth_signature_method=HMAC-SHA1
```

--- twitter2.py

```
import urllib
import twurl
import json

TWITTER_URL = 'https://api.twitter.com/1.1/friends/list.json'

while True:
    print ''
    acct = raw_input('Enter Twitter Account:')
    if ( len(acct) < 1 ) : break
    url = twurl.augment(TWITTER_URL,
        {'screen_name': acct, 'count': '5'} )
    print 'Retrieving', url
    connection = urllib.urlopen(url)
    data = connection.read()
    headers = connection.info().dict
    print 'Remaining', headers['x-rate-limit-remaining']
    js = json.loads(data)
    print json.dumps(js, indent=4)

    for u in js['users'] :
        print u['screen_name']
        s = u['status']['text']
        print '  ',s[:50]
```

--- twitter2.py output

```
Enter Twitter Account:drchuck
Retrieving https://api.twitter.com/1.1/friends ...
Remaining 14
{
  "users": [
    {
      "status": {
        "text": "@jazzychad I just bought one .__.",
        "created_at": "Fri Sep 20 08:36:34 +0000 2013",
      },
      "location": "San Francisco, California",
      "screen_name": "leahculver",
      "name": "Leah Culver",
    },
    {
      "status": {
        "text": "RT @WSJ: Big employers like Google ...",
        "created_at": "Sat Sep 28 19:36:37 +0000 2013",
      },
      "location": "Victoria Canada",
      "screen_name": "_valeriei",
      "name": "Valerie Irvine",
    ],
}
leahculver
   @jazzychad I just bought one .__.
_valeriei
   RT @WSJ: Big employers like Google, AT&amp;amp;T are h
ericbollens
   RT @lukew: sneak peek: my LONG take on the good &a
halherzog
   Learning Objects is 10. We had a cake with the LO,
```