

```
>>> import random
>>> random.choice(['apple', 'pear', 'banana'])
'apple'
>>> random.sample(range(100), 10)    # sampling without replacement
[30, 83, 16, 4, 8, 81, 41, 50, 18, 33]
>>> random.random()                  # random float
0.17970987693706186
>>> random.randrange(6)              # random integer chosen from range(6)
4
```

The `statistics` module calculates basic statistical properties (the mean, median, variance, etc.) of numeric data:

```
>>> import statistics
>>> data = [2.75, 1.75, 1.25, 0.25, 0.5, 1.25, 3.5]
>>> statistics.mean(data)
1.6071428571428572
>>> statistics.median(data)
1.25
>>> statistics.variance(data)
1.3720238095238095
```

The SciPy project <<https://scipy.org>> has many other modules for numerical computations.

10.7 Internet Access

There are a number of modules for accessing the internet and processing internet protocols. Two of the simplest are `urllib.request` for retrieving data from URLs and `smtplib` for sending mail:

```
>>> from urllib.request import urlopen
>>> with urlopen('http://tycho.usno.navy.mil/cgi-bin/timer.pl') as response:
...     for line in response:
...         line = line.decode('utf-8')    # Decoding the binary data to text.
...         if 'EST' in line or 'EDT' in line: # look for Eastern Time
...             print(line)

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>>> import smtplib
>>> server = smtplib.SMTP('localhost')
>>> server.sendmail('soothsayer@example.org', 'jcaesar@example.org',
...     """To: jcaesar@example.org
...     From: soothsayer@example.org
...
...     Beware the Ides of March.
...     """)
>>> server.quit()
```

(Note that the second example needs a mailserver running on localhost.)

10.8 Dates and Times

The `datetime` module supplies classes for manipulating dates and times in both simple and complex ways. While date and time arithmetic is supported, the focus of the implementation is on efficient member extrac-