13. DATE AND TIME

A Python program can handle date and time in several ways. Converting between date formats is a common chore for computers. Python's time and calendar modules help track dates and times.

What is Tick?

Time intervals are floating-point numbers in units of seconds. Particular instants in time are expressed in seconds since 12:00am, January 1, 1970(epoch).

There is a popular **time** module available in Python which provides functions for working with times and for converting between representations. The function *time.time()* returns the current system time in ticks since 12:00am, January 1, 1970(epoch).

Example

```
#!/usr/bin/python

import time;  # This is required to include time module.


ticks = time.time()

print "Number of ticks since 12:00am, January 1, 1970:", ticks
```

This would produce a result something as follows:

```
Number of ticks since 12:00am, January 1, 1970: 7186862.73399
```

Date arithmetic is easy to do with ticks. However, dates before the epoch cannot be represented in this form. Dates in the far future also cannot be represented this way - the cutoff point is sometime in 2038 for UNIX and Windows.

What is TimeTuple?

Many of Python's time functions handle time as a tuple of 9 numbers, as shown below: