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8.1: Prologue

The old riddle "If a tree falls in a forest where there is no one to hear it, does it still make a sound?" has an analogy in computer programming: "If a program does no input or output, does it still compute anything?" In both cases, the true answer is irrelevant; if a person doesn't hear the sound, or see the results of a computation, it might as well have never happened. Input and output (I/O) are central to every program's purpose. It must collect input to act on, and somehow make its results known to the user as output.

Being a product of network computing research, Java not surprisingly has very good support for network programming. The java.net package supports many types of network programming, from simple web-based data retrieval to complex TCP and UDP socket protocols. Furthermore, much of Java's network APIs are seamlessly integrated with the rest of the I/O libraries, so you can easily modify file-based or console-based applications to operate over a network instead.

As you read this module's commentary, remember that for security reasons not everything we discuss will be allowed in an applet. All the APIs and techniques discussed will, of course, work in Java applications.