**Chapter 33: Event-based Concurrency (Advanced)**

Different styles of concurrency are often used in GUI-based applications and internet server. They are **event-based concurrency**.

There are two problems. The first is managing concurrency in multi-threaded application. The second is that developers have no control or little control over what is scheduled.

* How can we build a concurrency server without using threads?

**33.1 The Basic Idea: An Event Loop**

The basic approach is **event-based concurrency**. The approach is that we simply wait for something to occur and then we check the type of event and do the small amount of work it requires.

Event-based server are based on a simple construct known as the **event loop**:

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The piece of code that processes each event is known as **event handler**. When the handler handles an event, it is the only activity taking place in the system (explicit control).

However, how does this server determine which events take place?

**33.2 An Important API: select() (or poll())**