Network Connections From Multiple Threads

All network-related operations and functions are thread-safe, which means that they can be called from multiple preemptive threads at the same time. This capability can be useful when:

- You want to retrieve information from several different URLs as quickly as possible.
- You want to do a long download or other operation in the background to avoid tieing Igor up.

The following example illustrates the first of these cases. It uses **FetchURL** to retrieve a list of the most frequently downloaded books from the Project Gutenberg web site. It then uses FetchURL to download the entire text of the top four books and prints the number of bytes in each.

```
ThreadSafe Function GetThePage(url)
   String url

   String response = FetchURL(url)
   return strlen(response)
End

Function ListGutenbergTopBooks()
   String topBooksURL = "http://www.gutenberg.org/browse/scores/top"
   String baseURL = "http://www.gutenberg.org/files/"

   // Get the contents of the page.
   String response = FetchURL(topBooksURL)
   Variable error = GetRTError(1)
   if (error || numtype(strlen(response)) != 0)
      Print "Error getting the list of most popular books."
      return 0
   endif

   String topBooksHTML = response

   // Remove all line endings.
   topBooksHTML = ReplaceString("\n", topBooksHTML, "")
   topBooksHTML = ReplaceString("\r", topBooksHTML, "")

   // Parse the page to get the section of the page
   // with the list of the most popular books from yesterday.
   // This could break if the format of the web page changes.
   String regExp = "(?i)<h2 id=\"books-last1\">.*?<ol>(.*?)</ol>"
   String topYesterdayHTML = ""
   SplitString/E=regExp topBooksHTML, topYesterdayHTML
   if (V_flag != 1)
      Print "Error parsing the top 100 books section."
      return 0
   endif

   // Replace the line endings.
   topYesterdayHTML = ReplaceString("</li><li>", topYesterdayHTML, "\r")

   // Create a wave to store text info about the top four books.
   Variable numBooksToUse = 4
   Make/O/T/N=(numBooksToUse, 2) topBooksInfo

   Make/O/N=(numBooksToUse) byteCounts

   Variable n
   String bookNumStr
   Variable bookNum
   String titleAuthor
```