

PV178: Programming for the CLI Environment

Seminar: Week 8

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Seminar outline

- 1 Using a webservice
- 2 GoogleSearch webservice
- 3 GoogleSearch example

Adding a webreference

- 1 In the Solution explorer right click on the project,
- 2 in the popup menu select "Add Web Reference",
- 3 in the "URL" textbox enter the url of the web service you want to use and click the "Go" button,
- 4 click the "Add Reference".
- 5 Now you are ready to use the service.
- 6 URL of the GoogleSearch service:
<http://api.google.com/GoogleSearch.wsdl>

GoogleAPI

- 1 Google provides a web service interface which allows others to integrate Google searches into their applications.
- 2 To use the Google API a valid license key is needed, to obtain a license key you must create an account at <http://www.google.ca/apis>.
- 3 For this example you can use
2zEm/qRQFHLPu6eYq3zi+hoZRTTrR0spd
- 4 The license key is limited to 1,000 calls per day.

GoogleSearch classes

- 1 GoogleSearchService
- 2 GoogleSearchResult
- 3 ResultElement

GoogleSearchService class

Method `GoogleSearchService.doGoogleSearch()`

- 1 Allows you to perform searches
- 2 Returns an instance of `GoogleSearchResult` class

doGoogleSearch()

Arguments:

- 1 `string key` - The Google license key.
- 2 `string q` - The search term (a word, phrase etc. to look for).
- 3 `int start` - The zero based index of the first result to be returned.
- 4 `int maxResults` - The maximum number of results to be returned by the query (from 0 to 10).
- 5 `bool filter` - When set to true it filters out duplicate search results.
- 6 `string restrict` - Allows to restrict the results only from some countries or topics.
- 7 `bool safeSearch` - When true it filters out adult content.
- 8 `string lr` - Language restrict.
- 9 `string ie` - Input encoding, ignored.
- 10 `string oe` - Output encoding, ignored.

GoogleSearchResult class

- 1 `int GoogleSearchResult.estimatedTotalResultsCount`
Gets the total number of results for the query.
- 2 `ResultElement[] GoogleSearchResult.resultElements`
The array of *maxResults* results.

ResultElement class

- 1 `string ResultElement.URL`
The URL of the result.

Task

Write a windows application using the GoogleSearch webservice. Allow user to enter a query term in a textbox and perform a query search against Google when a "Search" button is pressed. Show the query results URLs in a listbox and if user double-clicks an item in the listbox, show the corresponding webpage. When the number of results is greater than 10 allow to show the next 10 and previous 10 results using the "Previous 10" and "Next 10" buttons.

System.Windows.Forms.WebBrowser

- 1 A simple HTML document viewer.
- 2 `WebBrowser.Navigate(string url)`
Loads the document at the specified URL into the WebBrowser control, replacing the previous document.
- 3 For more details about this component see MSDN.

