

Generic DB Access using the Web

Andrew J. Phillips
Hewlett-Packard Company
20 Perimeter Summit Blvd.
Atlanta, GA 30319
404.648.5159
404.648.1816
andy_phillips@hp.com

Agenda

- Architectural Overview – 5 min
- Examples: ASP, PerlScript, CGI/perl – 30 min
- Update and References – 5 min
- Questions – 10 min

Case Study: Database Admin

- This shows the Evolution of a **NEED**
- Wanted to look at and **CHANGE** data in a Database
 - Started with a “test” page for a single DB
Better functionality using PerlScript
 - Useful for several applications with several different databases
 - Wanted to see if a generic interface would work (and how easy to use I could make it.)

Introduction + Technical Stuff

- Technologies: IIS 4.0, ODBC, Perl, PerlScript, ADO 2.1, ASP, SQL
- Learn: Perl, Modules, ODBC Setup, DB Access
- Prerequisites: perl 5.6, IIS 4.0, and ‘any’ ODBC DB and driver installed
- Ideally – should already have ODBC data source(s) installed, and be running IIS
- This is a “how to use some web technologies” kind of presentation

System Setup & Environment

- Installing IIS and ADO
- Installing Perl 5.6
- Installing ODBC Driver(s)
- Configuring an ODBC data source
- Database Access and Login Information
- Try <http://multiweb.lib.calpoly.edu/odbc/>

Ways to access DBs from Perl

- ADO – ActiveX Data Objects API can also be used with the win32::OLE module
- DBI – DB Interface module for Perl
- ODBCTable – lets you tie an ODBC table to a Perl hash
- Sybase – the Sybperl module allows you to connect to Sybase SQL Server
- Win32::ODBC (avail from CPAN & www.roth.net/odbc/)

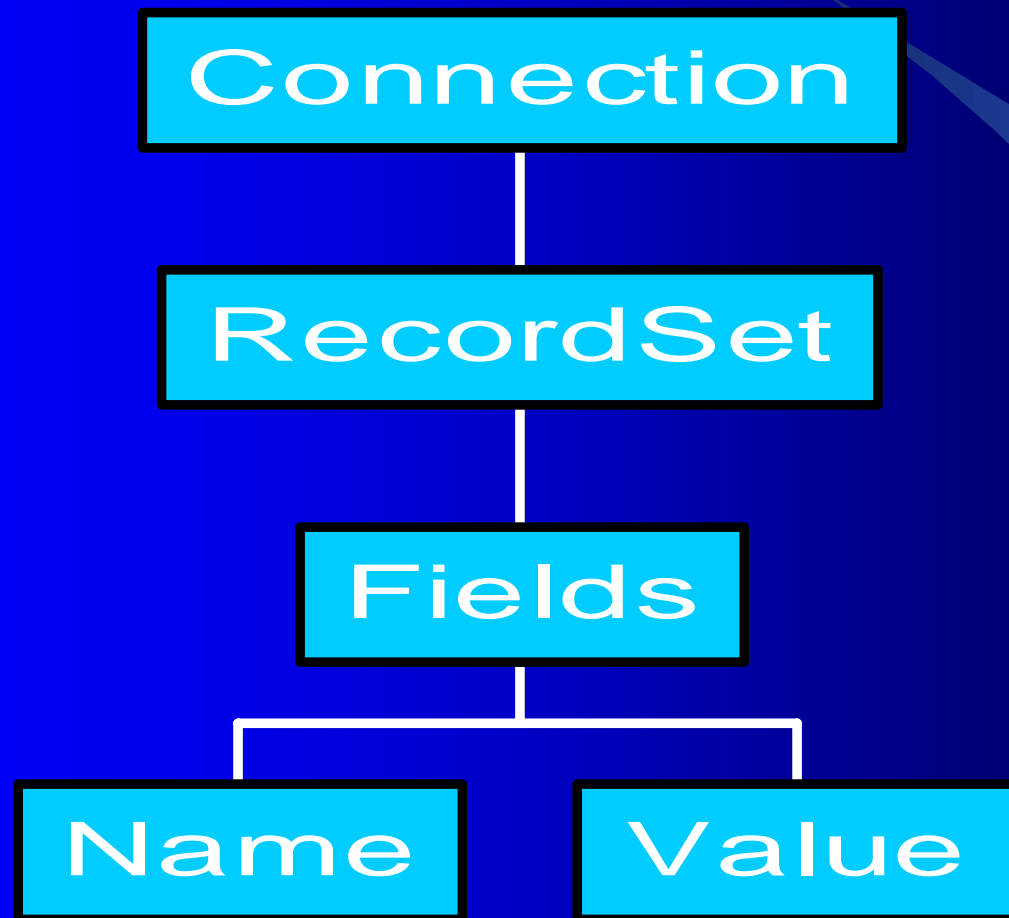
Win32::ODBC Module

- Excellent example script, includes details - test.pl
- Performs 11 different 'tests' of module functions
- Catalog(DSN)
- TableList(Conn,Q, Owner,Name,Type)
- ColAttributes(Attribute, RecordSet)
- Try <http://www.roth.net/perl/odbc/>

PerlScript

- Option when installing ActiveState Perl
- Can set as default (per page)
- Used just like VBScript
- Access to ADO Objects & Collections

Object Hierarchy for ADO

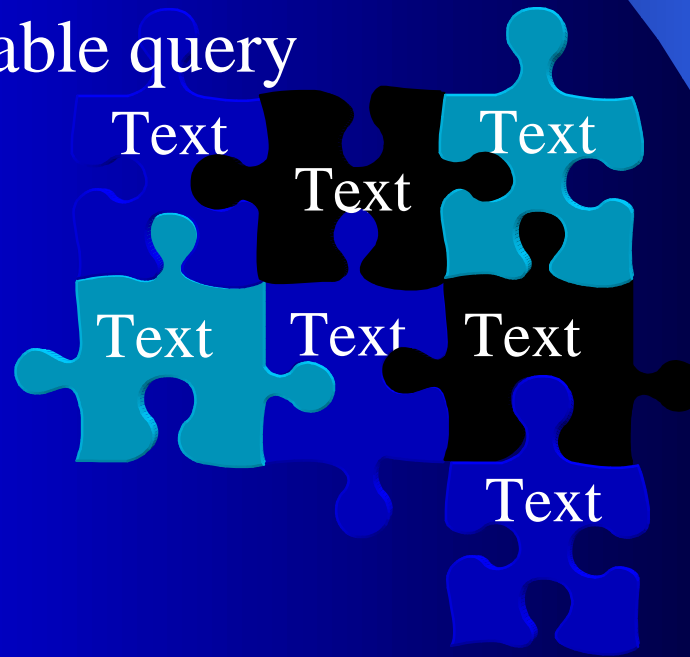


Basic Steps to getting data

- `my $MyConn = $Server->CreateObject(ADODB.Connection);`
- `$MyConn->Open("myDSN");`
- `my $RS = $Conn->Execute("SELECT * from [Table Name];");`
- `while (!$RS->EOF) {
 $Response->write($RS->Fields($i)->value; $RS->MoveNext(); }`
- `$MyConn->Close();`

Development Overview

- Started with a “test” page for a single DB-test.asp
- Better functionality using PerlScript ajptest.asp
- 1st crack @ generic table query
- Modified to 3 steps
 - Search.asp
 - Results.asp
 - Testedit.pl



Easy Generic SQL Window

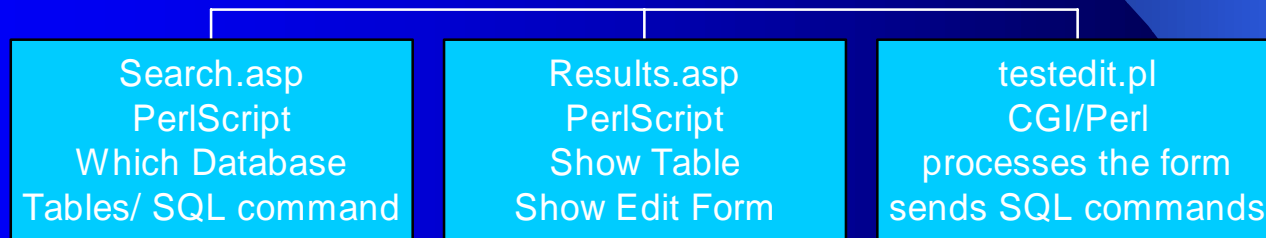
- Security issues
- EASY 'command window'
- Test.asp and test2.asp (VBScript)

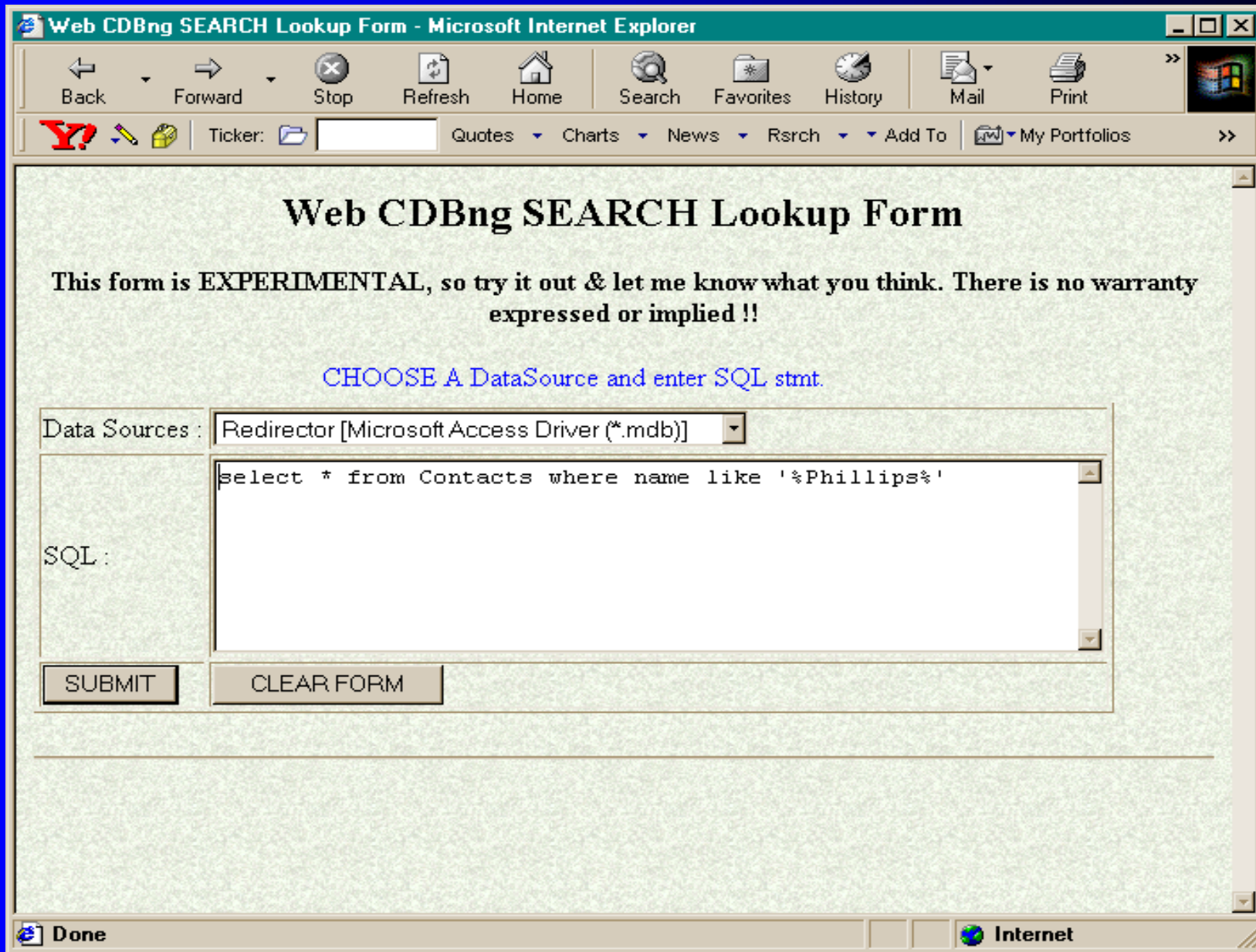
HOW TO DO THIS :

- Get a List of DSN's
- Display on web server
- Provide SQL Interface – choose tables/fields
- Display Results - HTML Table
- UPDATE DB or Execute Arbitrary (SQL) Commands
- BEST if we can Display DSNs, Tables, Fields in Advance

GENERIC DB Access Process

A set of three server pages





Web CDBng RESULTS Lookup Form - Microsoft Internet Explorer

Back Forward Stop Refresh Home Search Favorites History Mail Print Copy Discuss RealGuide

Quotes Charts News Search Add To My Portfolio Markets Y!Bookmarks Sign Out

Web CDBng RESULTS Lookup Form

This form is EXPERIMENTAL, so try it out & let me know what you think. There is no warranty expressed or implied !!

ODBC Data Source is: Redirector
 SQL is : select * from Contacts where name like '%Philips%'

SQL = select * from Contacts where name like '%Philips%'

	Name	App_Name	Phone	Email	Notes	Hours	Days	Organization
0	Andrew J. Philips	www.ajp.hp.com	648-5159	andy_philips@hp.com	primary entry	24x7	Monday-Friday	TSS
1	Andy Philips	www.andy.hp.com	648-5160	ajp@atl.hp.com	PRIMARY	24x7	Monday-Friday	TSS

IDX	Field Name	CURRENT VALUE
<input type="checkbox"/>	Name ::	Andy Philips
<input type="checkbox"/>	App_Name ::	www.andy.hp.com
<input type="checkbox"/>	Phone ::	648-5160
<input type="checkbox"/>	Email ::	ajp@atl.hp.com
<input type="checkbox"/>	Notes ::	
<input type="checkbox"/>	Hours ::	24x7
<input type="checkbox"/>	Days ::	Monday-Friday
<input type="checkbox"/>	Organization ::	TSS

SUBMIT CLEAR FORM UPDATE INSERT-ADD/NEW DELETE

[GO BACK](#)

Done Internet

testedit.pl – UPDATE the DB

- Figure out which ACTION to take
- Process the data in the form
- Send the SQL to the DB
- Check the results !

Summary

- Defined a web server environment
- Showed LOTS of example source
 - Can use as a Template
 - Modify for your local needs
 - Learn more by doing
- Check out the references and URLs
- Request feedback of training session

Footnotes

Perl Utilities Guide – Win32 Edition, Brian Jepson, O'Reilly, 1st Edition, 1998

ASP in a Nutshell, A. Keyton Weissinger, O'Reilly, 1st Edition, 1999

Active Server Pages 3.0, Alex Homer et al, Wrox Press Ltd, 1999

“Active Scripting with PerlScript”, Microsoft Internet Developer August 1999, vol 4 no. 8, Tobias Martinsson

“Someone else's database”, WebTechniques March 2001, vol 6 issue 03, Brian Jepson

Source Listings

- <http://www.angelfire.com/geek/InterWorks2001/>
 - Home page
 - Secure LDAP Presentation
 - This ODBC Presentation
 - SOURCE CODE too !

Other Tutorial URLs

- <http://www.pageresource.com/cgirec/index2.htm>
- http://www.stylusinc.com/cgi_installation/help.htm
- <http://developer.earthweb.com>
- <http://www.perlaccess.com>
- http://hotwired.lycos.com/webmonkey/programming/perl_cgi/
- <http://www.netcat.co.uk/rob/perl/win32perltut.html>
 - REAL BASIC TUTORIAL
- <http://www.thescripts.com/>
- <http://resources.duckpaw.com/articles/serverside/perl/>
- <http://www.ncsa.uiuc.edu/General/Training/PerlIntro>
- <http://www.perl-manual.com/>
- <http://wdvl.com/Authoring/Languages/Perl/PerlfortheWeb/index4.html>
- <http://msdn.microsoft.com/workshop/languages/clinic/scripting012299.asp>

Useful Perl URLs

- <http://www.perlscript.com>
- <http://www.homeworlds.com/freesoft/perlscrp.htm>
 - Matt's script archive
- <http://www.devdaily.com/perl/sod/3.shtml>
- <http://www.ictus.net/CGI-City/>
- <http://www.matrixvault.com/cgi/index.shtml>
 - UNIX Flavor only
- SEARCH for Perl or PerlScript !