1.264 Lecture 13

Web and Database
SQL Server database access

- Create login for SQL Server in SSE
  - In Object Explorer, open Security->Logins
  - Right click, select ‘New login’
  - Select SQL Svr authorization; enter name, password
  - Select default database= MIT1264
  - Check all server roles, check user mapping for MIT1264

- Create ODBC Data Source Name (DSN) for db
  - In Windows: Control Panel->Administrative->ODBC
  - Give DSN a name, choose (localhost)\SQLEXPRESS
  - SQL Server authentication; enter username, password
  - Change default database to MIT1264
Dreamweaver and database access

• In Dreamweaver:
  – Site -> New Site
  – Select server technology: ASP/VBScript
    Old but stable with Dreamweaver
  – Select ‘Edit and test locally’
  – Set root folder in your C:\\Inetpub\\wwwroot folder
  – Type http://localhost/folderName to test
  – Open Database panel (Window->Databases)
    Click + sign
    Connection name: connMIT1264
    Enter ODBC DSN
    Test
Display data in Web page from database

- Insert Recordset: rsParts, Parts table
- Insert table (Standard or Layout view)
  - 2 rows, 2 columns
  - Drag Part Id, Vendor from Bindings to document
- Select ‘Live View’: will show first row
- Select second row (with data)
  - Select Repeating Region
- Hit F12 to preview in browser
  - No formatting, but basic connection exists
- Examine XHTML code briefly
- DW tutorial in chapter 21 shows how to build master-detail pages, format with CSS, etc.
Insert data in Web page from database

- Create new page (Insert.asp)
- Create recordset (rsParts)
- Insert-> Application Object-> Insert Records -> Wizard
  - Same connection
  - Parts table
  - After insertion, go to display (previous) page
- Hit F12 to preview in browser
- Examine XHTML code
- DW chapter 22 tutorial has more detail
Edit data in Web page from database

- Create new page (Insert.asp)
- Create recordset (rsParts)
- Insert-> Application Object-> Insert Records -> Wizard
  - Same connection
  - Parts table
  - After insertion, go to display (previous) page
- This only edits the first row!
  - To edit any row, we need a link from another page/form
  - We then use a URL parameter to pass the part ID from the first page to the update page
  - See DW chapter 22 tutorial
Delete data in Web page from database

- Create new page (Delete.asp)
- Create recordset (rsParts)
- Create a simple form:
  - Label: Delete first record
  - Submit button
- Insert-> Application Object-> Delete Records -> Wizard
  - Same connection
  - Parts table
  - After insertion, go to display (previous) page
- This deletes the first row!
  Again, see DW tutorial in chapter 22 for URL parameter
ODBC Architecture (and others)

- Application
- ODBC driver manager
  - Oracle driver
  - SQL Server driver
  - Dbase driver

Database svr
- Oracle server (data source)
- SQL Server (data source)
- Data

Application server
- Data
Browser-server forms interaction

Step 1: Browser requests form without any parameters
Step 2: Server fetches form, and returns empty input form
Step 3: User fills out input form and presses ‘submit’ button
Step 4: Browser packages form into query string and sends to server
Step 5: Program synthesizes a response document and returns it

Every **dynamic** validation, fill-in requires server intervention.
- If later choices depend on earlier choices, etc.
- AJAX, Javascript, applets are used for this
- Pages can be XML or XHTML
Web-database interaction problems

- **POST sends data as text string**
  - No data types, mandatory, relationships, objects…
  - Little ability to validate data when sending from client, or when receiving at server
  - No standard variable names, tags or transaction sets
    - Everyone can have different orders, parts, catalogs,…
- **POST can be used by programs without human input as well**
  - Must get data from database, where it’s normalized, checked, etc.
  - Put it in a text string, which is unchecked, etc.
  - Server must parse it (with possible errors)
- **Next time we cover XML and SOAP as solutions**