The J&H Dog and Cat Clinic
GROUP 2
  Erin Czech
  Jerry Kong
  Jenny Olivera
  Erik Sandall
Group Project, Phase 6
LIBR 242-01, G. Liu
April 23, 2008

Introduction

The group produced a web site that inserts into, updates, deletes from, and retrieves from the database. All of this was accomplished using standard web technology combined with a special Oracle servlet and no programming. There are 16 functions and about twice as many web pages. The link to the home page is: http://delphi.sjsu.edu/xsqldemo/group2_xsql/j-hscenario.html.
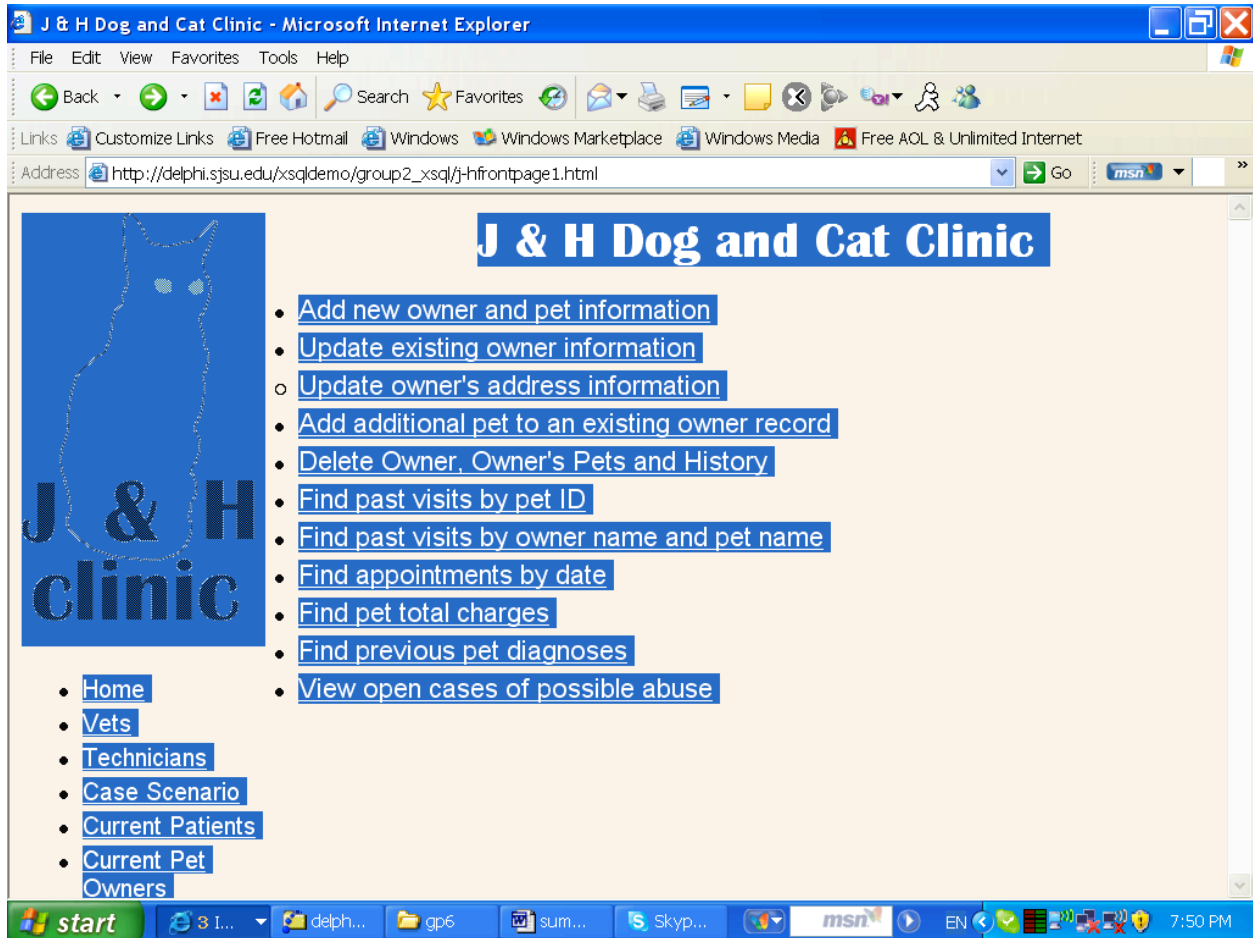
Listing of functions and files (in delphi.sjsu.edu/export/home/group2/group2_xsql):

Function	Files
Home	j-hfrontpage1.html 242style1.css
Vets	jhvets.xsql jhvets.xsl
Technicians	jhtechs.xsql jhtechs.xsl
Case Scenario	j-hscenario.html
Current Patients	jhpets.xsql

Function	Files
	jhpets.xsl
Current Pet Owners	jhowners.xsql jhowners.xsl
Add new owner and pet information	petowneradd.html petowneraddq.xsql
Update existing owner information	ownerupdate1.html ownerupdate1.xsql ownerupdate1.xsl ownerupdate2.xsql ownerupdate2.xsl
Update owner's address information	jhaddressupdate1.html jhaddressupdate1.xsql jhaddressupdate1.xsl jhaddressupdate2.xsql jhaddressupdate2.xsl
Add additional pet to an existing owner record	jhaddpet.html jhaddpet.xsql jhaddpet.xsl
Delete Owner, Owner's Pets and History	jhdeleteowner.html jhdeleteowner.xsql jhdeleteowner.xsl jhdeleteowner2.xsql
Find past visits by pet ID	q2.html petq2a.xsql petq2html.xsl
Find past visits by owner name and pet name	jykvisitbyname.html jykvisitbyname.xsql jykvisitbyname.xsl
Find appointments by date	jhapp2.html jhappt.xsql jhappt.xsl
Find pet total charges	jhcharges.html jhcharges.xsql jhcharges.xsl
Find previous pet diagnoses	diagquery.html diagquery.xsql diagquery.xsl
View open cases of possible abuse	openabuse.xsql openabuse.xsl

Descriptions of Functions

The J&H Dog and Cat Clinic home page has two sets of link bars: on the left and in the middle. The links on the left bar are basically directories of the current employees and clients of the clinic. The links in the middle of the page are SQL functions for both the employees and the clients of the clinic. Listed below are descriptions of the different links on the home page.

Directory services on the left bar

Accessing the links on the left bar will provide the user with information regarding the veterinarians and vet techs currently employed by the J&H Clinic and the pets and pet owners currently using the clinic. This information is updated as it changes and should be referred to when using the functions on the home page. A link to our group's case scenario is also present.

Add new owner and pet information

This link allows a user—most likely a vet tech or receptionist—to add a record to the PET_OWNER entity of the database system. The buttons at the bottom of the page will allow the user to record the information if it is entered correctly or clear all fields if there is a mistake. After the PET_OWNER information is recorded, a page will appear asking the user if they want to link a PET record to the new PET_OWNER record. This link will take the user to the "Add additional pet to an existing owner record," which is described below.

Update existing owner information

This link allows a user to update an existing record in the PET_OWNER entity. The first page asks for the OWNER_ID of the record the user wishes to update. Applicable OWNER_IDs can be found by clicking the "Current Pet Owners" link on the left bar. After the OWNER_ID is entered, the next screen will appear with filled-in fields displaying the current information present in the corresponding PET_OWNER record. All information, except the OWNER_ID, can be updated. The SEND button will record the changes and the START OVER button will return the record to its previous state.

Update owner's address information

The update address link follows the same sequence as the previous link. At the first screen, a user enters an OWNER_ID and marks a radio button to identify whether they are updating a residential or billing address. If, for example, a pet owner has no corresponding billing address, the system will return a blank page. If there is a match, the system will return a page with filled-in fields from the OWNER_ADDRESS entity that can be updated and recorded into the system.

Add additional pet to an existing owner record

This page allows a user to add a record to the PET entity, which will be related by foreign key to an existing record from the PET_OWNER entity. The user can enter the first and last name of a PET_OWNER that is already recorded in the system and the information for a new related PET record. The new PET record will contain the preexisting OWNER_ID as a foreign key. If the name entered into first and last name

fields does not return a match in the system, then nothing will be recorded.

Delete owner, owner's pets and history

This page allows a user to delete all records associated with an existing PET_OWNER. On the first page, the user can enter the first and last name of a PET_OWNER they wish to delete from the system. After this is entered, a second page will appear asking the user to confirm the deletion.

Find past visits by pet ID

This function allows a veterinarian or a technician to view details about past visits of a pet. The user enters the pet ID number, and a table is displayed showing the name of the pet, the date of the visit(s), and the reason(s) for the visit.

Find past visits by owner name and pet name

Here, the user can look up details about past pet visits. The user must enter the owner's full name and the pet's name. As with the above query, a table is displayed showing the name of the pet, the date of the visit(s), and the reason(s) for the visit.

Find appointments by date

If a technician needs to see all of the appointments scheduled for a particular date, she can do so with this function. After entering the desired date, a table is displayed showing the attending staff member, date and time, pet and owner names, pet species and breed, pet age, and the reason for each appointment.

Find pet total charges

A technician can access the charge history of a pet with this function. The user enters the pet ID number and/or the pet name, and the resulting table lists information about each visit, including the visit ID number, visit date, and total charge for the visit.

Find previous pet diagnoses

This function allows a veterinarian to track a pet's health by showing previous diagnoses for a pet. As above, the user enters the pet ID number and/or the pet name. The data in the resulting table includes the pet ID and name, the description of the diagnosis, and the date the diagnosis was made.

View open cases of possible abuse

Veterinarians and technicians can click on this link to see a current, up-to-date list of open cases of possible pet abuse. The table displays pet and owner names, owner phone number, the visit date the abuse was recorded, the severity of the abuse, and a description of the abuse.

Challenges and Discoveries

- It was important to learn how to pass parameters from an HTML form to an SQL statement in an xSQL file for either update or retrieval. This is demonstrated in the following: *Update existing owner information* and *Add additional pet to an existing owner record.*

- Using XSLT to parse the returned XML file from Oracle and placing it in a form was also challenging. Helpful examples were provided by the instructor. The technique is demonstrated in *Update existing owner information* and *Update owner's address information.*

- The *Delete Owner, Owner's Pets and History* function provided insight to database locking. Deletions must start with the children and move up the hierarchy of dependent entities in the right sequence because Oracle can be used to enforce parent-children relationships. In this function we had to compose nine DELETE statements. SQL is very powerful, but also has the potential to be very inefficient. Logically all delete statements should be completed together. However, when this was attempted, the database would return an error that locking was occurring. The solution was to insert a COMMIT statement in between each DELETE. Then, all nine DELETEs occurred very quickly. There are opportunities to improve the overall performance and commit all DELETES as one unit of work, but this would require some PL/SQL coding.

- The technique that was described to handle the XML result from an SQL statement using XSLT was very interesting and would be the right finishing touch once everything was debugged and ready to be made user friendly. While we were still working on the code, it was easier to just see the raw XML file containing the SQL error or the confirmation without using XSLT.

- PL/SQL inside of a <xsql:dml> file was useful for providing the ability to insert into multiple tables in a unit of work as in the *Add new owner and pet information* function.

- It's not always enough to enclose the query in <xsql:query> tags. The more complicated queries wouldn't work unless they were also enclosed in <![CDATA[ ]]>. But on the other hand, simple SELECT queries wouldn't work when they were in a CDATA tag.

- Oracle commands may not be case sensitive, but the data values seem to be. Even copying and pasting the exact values that were entered into the database returned no rows, but changing both sides of the SQL equation to "upper" and using those same values retrieved the desired information.

- Carrying a value from one table and inserting it into another automatically (like inserting the OWNER_ID into the PET record) took some working, as did making the ID and DATE values automatic.

- We originally wanted the "update address" page to be able to return multiple addresses at once, if applicable. Unfortunately we couldn't iron out the SQL for this, so instead made it an either/or choice for address type.

Codes

j-hfrontpage1.html

```
<!DOCTYPE html SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <link rel="stylesheet" type="text/css" href="242style1.css"/>
        <title>J &amp; H Dog and Cat Clinic</title>
    </head>
    <body>
        <div id="left">
            <img src="J-Hicon1.png" alt="J and H clinic" name="j-hicon"
border="0" height="351"
            width="195" />
            <ul>
                <li>
                    <p class="small"><a href="j-
hfrontpage1.html">Home</a></p>
                </li>
                <li>
                    <p class="small"><a href="jhvets.xsql">Vets</a></p>
                </li>
                <li>
                    <p class="small"><a
href="jhtechs.xsql">Technicians</a></p>
                </li>
                <li>
                    <p class="small"><a href="j-hscenario.html">Case
Scenario</a></p>
                </li>
                <li>
                    <p class="small"><a href="jhpets.xsql">Current
Patients</a></p>
                </li>
                <li>
                    <p class="small"><a href="jhowners.xsql">Current Pet
Owners</a></p>
                </li>
            </ul>
        </div>
        <h1>J &amp; H Dog and Cat Clinic</h1>
        <ul>
            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/petowneradd.html">Add
new owner and
                    pet information</a></p>
            </li>
            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/ownerupdate1.html">Upd
ate existing owner information</a></p>
                <ul>
                <li><p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/jhaddressupdate1.html"
```

```
>Update owner's address information</a></p></li>
                </ul>
            </li>
            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/jhaddpet.html">Add
additional pet to an existing owner record</a></p>
            </li>
             <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/jhdeleteowner.html">De
lete Owner, Owner's Pets and History</a></p>
            </li>

            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/q2.html">Find past
visits by
                pet ID</a></p>
            </li>
            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/jykvisitbyname.html">F
ind past
                visits by owner name and pet name</a></p>
            </li>
            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/jhappt2.html">Find
appointments by date</a></p>
            </li>
            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/jhcharges.html">Find
pet total charges</a></p>
            </li>
             <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/diagquery.html">Find
previous pet diagnoses</a></p>
            </li>            <li>
                <p><a
href="http://delphi.sjsu.edu/xsqldemo/group2_xsql/openabuse.xsql">View
open cases of possible abuse</a></p>
            </li>
        </ul>
    </body>
</html>
```

242style1.css

```
body
{background-color: #fdf5e6;
font-family: arial, sans-serif;
color: #191919}

h1
```

```
{text-align: center;
font-family: "britannic bold", arial, sans-serif}

p
{font-size: 110%;
margin-top: .5ex;
margin-bottom: .5ex}

p.small
{font-size: 100%}

p.large
{font-size: 120%;
font-family: arial, sans-serif;
text-indent: .5cm}

p.p
{font-size: 100%;
text-indent: .5cm;
margin-left: .5cm;
margin-right: .5cm;
margin-top: .25cm;
margin-bottom: .25cm}

a:link {color:#483d8b}
a:visited {color:#696969}
a:hover {background-color: #ffddee}

.center {text-align: center}

#left {position: relative;
        float: left;
        width: 200px;
        top: 0;
        margin-right: .5cm;
        left: 0}

#right {position: relative;
        padding-left: 190px;
        top: 5px;
        right: 0}
```

jhvets.xsql

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="jhvets.xsl" ?>

<xsql:query connection="group2"  xmlns:xsql="urn:oracle-xsql" >

select    STAFF_FNAME, STAFF_LNAME, STAFF_EMAIL
from      STAFF
where     ROLE_ID = 1001

</xsql:query>
```

jhvets.xsl

```
<?xml version="1.0"?>
```

```
<!-- FAQ-IN-HTML.xsl: Transform ROWSET/ROW format into HTML format -->
<html xsl:version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
    <head>
        <title>J &amp; H Clinic - Vets</title>
        <style type="text/css">
            td {
            font-family:verdana,arial;
            font-size:18;
            background-color:#f7f7e7;
            color:#000000
            }
            th,table {
            font-family:verdana,arial;
            font-size:18;
            background-color:#cccc99;
            color:#336699
            }</style>
        <link rel="stylesheet" type="text/css" href="242style1.css"/>
    </head>
    <body>
        <div id="left">
            <a href="j-hfrontpage1.html">
                <img src="J-Hicon1.png" alt="J and H clinic" name="j-
hicon" border="0" height="351"
                    width="195"/>
            </a>
            <ul>
                <li>
                    <p class="small"><a href="j-
hfrontpage1.html">Home</a></p>
                </li>
                <li>
                    <p class="small"><a href="jhvets.xsql">Vets</a></p>
                </li>
                <li>
                    <p class="small"><a
href="jhtechs.xsql">Technicians</a></p>
                </li>
                <li>
                    <p class="small"><a href="j-hscenario.html">Case
Scenario</a></p>
                </li>
                <li>
                    <p class="small"><a href="jhpets.xsql">Current
Patients</a></p>
                </li>
                <li>
                    <p class="small"><a href="jhowners.xsql">Current Pet
Owners</a></p>
                </li>
            </ul>
        </div>
        <div align="center">
        <h1>Veterinarians on staff</h1>
            <table border="0">
                <tr>
```

```
                        <th>FIRST NAME</th>
                        <th>LAST NAME</th>
                        <th>E-MAIL</th>
                  </tr>
                  <xsl:for-each select="ROWSET/ROW">
                        <tr>
                              <td>
                                  <xsl:value-of select="STAFF_FNAME"/>
                              </td>
                              <td>
                                  <xsl:value-of select="STAFF_LNAME"/>
                              </td>
                              <td>
                                  <xsl:value-of select="STAFF_EMAIL"/>
                              </td>
                        </tr>
                  </xsl:for-each>
            </table>
         </div>
      </body>
</html>
```

jhtechs.xsql

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="jhtechs.xsl" ?>

<xsql:query connection="group2"  xmlns:xsql="urn:oracle-xsql" >

select    STAFF_FNAME, STAFF_LNAME, STAFF_EMAIL
from      STAFF
where     ROLE_ID = 1002

</xsql:query>
```

jhtechs.xsl

```
<?xml version="1.0"?>
<!-- FAQ-IN-HTML.xsl: Transform ROWSET/ROW format into HTML format -->
<html xsl:version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
    <head>
        <title>J &amp; H Clinic - Vet Techs</title>
        <style type="text/css">
            td {
            font-family:verdana,arial;
            font-size:18;
            background-color:#f7f7e7;
            color:#000000
            }
            th,table {
            font-family:verdana,arial;
            font-size:18;
            background-color:#cccc99;
            color:#336699
            }</style>
        <link rel="stylesheet" type="text/css" href="242style1.css"/>
    </head>
```

```
<body>
    <div id="left">
        <a href="j-hfrontpage1.html">
            <img src="J-Hicon1.png" alt="J and H clinic" name="j-
hicon" border="0" height="351"
                width="195"/>
        </a>
        <ul>
            <li>
                <p class="small"><a href="j-
hfrontpage1.html">Home</a></p>
            </li>
            <li>
                <p class="small"><a href="jhvets.xsql">Vets</a></p>
            </li>
            <li>
                <p class="small"><a
href="jhtechs.xsql">Technicians</a></p>
            </li>
            <li>
                <p class="small"><a href="j-hscenario.html">Case
Scenario</a></p>
            </li>
            <li>
                <p class="small"><a href="jhpets.xsql">Current
Patients</a></p>
            </li>
            <li>
                <p class="small"><a href="jhowners.xsql">Current Pet
Owners</a></p>
            </li>
        </ul>
    </div>
    <div align="center">
        <h1>Veterinary Technicians on staff</h1>
        <table border="0">
            <tr>
                <th>FIRST NAME</th>
                <th>LAST NAME</th>
                <th>E-MAIL</th>
            </tr>
            <xsl:for-each select="ROWSET/ROW">
                <tr>
                    <td>
                        <xsl:value-of select="STAFF_FNAME"/>
                    </td>
                    <td>
                        <xsl:value-of select="STAFF_LNAME"/>
                    </td>
                    <td>
                        <xsl:value-of select="STAFF_EMAIL"/>
                    </td>
                </tr>
            </xsl:for-each>
        </table>
    </div>
</body>
```