Completing the SCCHC Database, Part II

Constructing queries for the Seattle Central Community Health Clinic

Review of SCCHC Operation

- Part II of Project 4 looks at the next set of operations: the requests for tests to be performed, as well the management of those requests as they make their way to the lab for processing and come back with results
  - Enter client data
  - Queue client for visit with health professional
  - Health professional fills out consultation chart
  - Order tests
  - Label specimens
  - Compare specimens to manifest
  - Record results from test outcome

Ordering Tests

- The final act of a visit is for the health professional to "order" the tests
- You will need to set up 4-6 "visits" between your clients and health professionals in order to have records where you can order tests
- The action of ordering in the database system is to create the client's tracking number
- This involves adding a command button control and programming the creation of the tracking number

Screen Shot of Sample Consult Form
The Order Button

- Like any command button control, the database developer places it on the form and programs the event handler.
- The difference for Access is that the handler will prepare for different operations... so selecting the right option is important.

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Computing the Tracking Number

- After completing the form wizard, the command button event handler has the following code:
  ```vbc
  Option Compare Database
  Option Explicit
  Private Sub cmdOrder_Click()
    On Error GoTo Err_cmdOrder_click
    DoCmd.DoMenuItem acFormBar, acRecordsMenu, 5, , acMenuVer70
    Exit_cmdOrder_Click:
    Exit Sub
  Err_cmdOrder_click:
    MsgBox Err.Description
    Resume Exit_cmdOrder_Click
  End Sub
  ```

  Tracking number computation here

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  ```

Enter the Tracking Number

- The tracking number field is something the user cannot enter (locked field) and cannot change...
- TrackingNumber.SetFocus
- TrackingNumber.Locked = False
- TrackingNumber.Text = "SCCHC" & Hex((12 * (Year(Date) - Year("06/26/01")) + Month(Date)) * 1000000 + VisitID)
- TrackingNumber.Locked = True

- What is the tracking number? It is the letters "SCCHC" followed by the computer’s hexadecimal encoding of the number of months since the creation of the database followed by the VisitID.
- The tracking number is reversible, but not easily associated with a person or a visit.

The Results...

- Click on Order to create the tracking number IF tests are requested.

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SCCHC Design Thus Far

- The SCCHC has the following components so far:
  - tblClient table with frmClient, frmReception form and linked frmSeeHealthPro form (starts rows of data in the Visit table)
  - tblHealthPro and frmHealthClinicStaff form
  - tblVisit Table and frmConsult Form with Order button to set the tracking number
  - Now all you need to do is prepare for the post-visit processing
  - The main idea in “post visit” processing is to build new tables from the data in the Visit table
  - These virtual tables (views) are produced through queries

Queries: Create Tables From Tables

- The queries you will use are questions to the database system asking to view the requested data in a new (virtual) table

A Query

- SELECT Visit.TrackingNumber, Visit.DrugTestRequired, Visit.HIVTestRequired, Visit.AidsTestRequired
  FROM Visit;

Using the QBE for Queries

- Place the tables that will be a part of the table operations here. This is the FROM clause of an SQL statement. You may have one or many tables included.
- Use the Sort row to arrange the data in that field in ascending or descending order. This is the ORDER BY clause in SQL.
- Indicate any non-key constraints (criteria) of the table operation here. These are a part of the WHERE clause of the SQL.
- Place the attributes (columns) of the table operation that you want to see displayed in the Field row. This is the SELECT clause of the SQL statement.
Queries Can Do More Than Show Columns…

- Records with specific properties can be tested

- We can create a query that keeps only those entries where the Tracking field is not empty and a drug test was requested.

Changes In the Query are Visible

```
SELECT Visit.DateOfVisit, Visit.TrackingNumber, Visit.DrugTestRequired, Visit.HIVTestRequired, Visit.AidsTestRequired
FROM Visit
WHERE (((Visit.TrackingNumber) <> '') AND (Visit.DrugTestRequired) = Yes));
```

How To Specify Criteria For Testing in QBE

- After identifying the table and columns to be shown, edit the criteria.

At the SCCHC, Starting the Manifest

- Save any test requests for nonempty tracking numbers created today.

Criteria on the same line are combined with AND, on separate lines they are combined with OR.
Making the Manifest Report

- Once you have a series of queries forming the Manifest and individual test lists, a report and labels can be printed.

<table>
<thead>
<tr>
<th>HIV Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Test Required</td>
</tr>
<tr>
<td>HIV</td>
</tr>
<tr>
<td>HIV</td>
</tr>
<tr>
<td>HIV</td>
</tr>
<tr>
<td>HIV</td>
</tr>
</tbody>
</table>

Wrapping Up the SCCHC Database

- There should be a query (virtual table) built for each test offered.
- Labels and Reports can be built from the same queries.
- You will have to take what you have learned today (and read the project description) to figure out how to build additional queries that will prompt a user for the date and then recreate the virtual tables to allow them to enter results back from the labs.