

Systems Development: Detailed Design Lab

Background

This is a practical, hands-on laboratory assignment to demonstrate the connection of Oracle XE with Access. Some of the lab steps must be completed by a person with administrative privileges. Other steps can be completed by ordinary students.

Due Date

Please complete the assignment by May 14. Although there is nothing to turn in, it will be impossible to complete the Unit 07 assignment without first completing this one.

Administrative Tasks

The following steps should be completed by a person with administrative privileges in Oracle XE and Microsoft Windows.

Create Accounts in Oracle XE

Since we have three groups developing a student registration database, we need one account for each group. Create three Oracle XE accounts using the options shown on the following screen:

User: JPK

Home > Administration > Manage Database Users > **Create Database User**

Create Database User

* Username

* Password

* Confirm Password

Expire Password

Account Status: ▼

Default Tablespace: **USERS**

Temporary Tablespace: **TEMP**

User Privileges

Roles:

CONNECT RESOURCE DBA

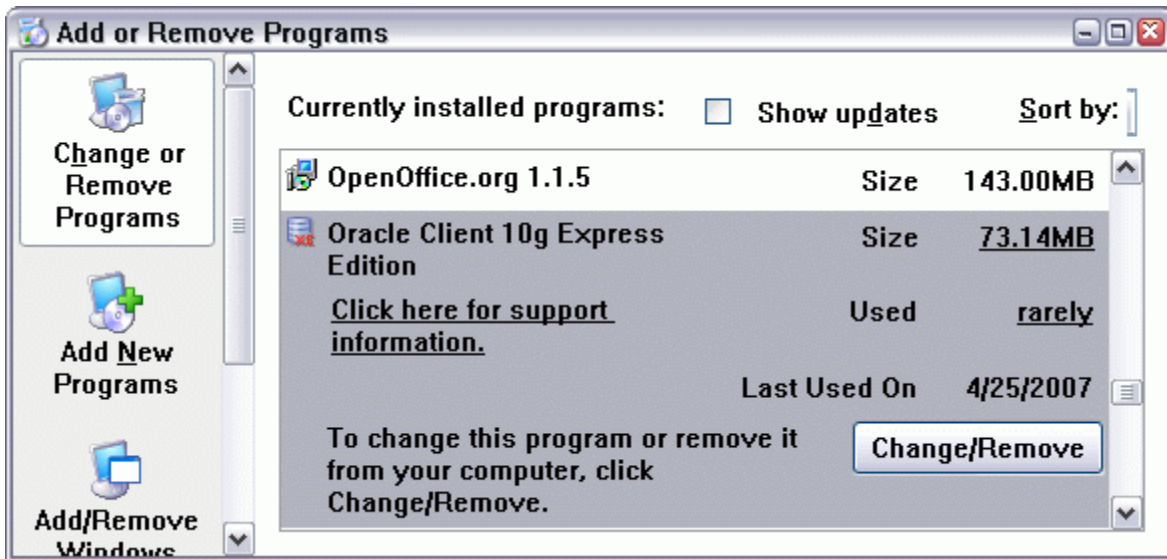
Direct Grant System Privileges:

<input type="checkbox"/> CREATE DATABASE LINK	<input type="checkbox"/> CREATE MATERIALIZED VIEW	<input checked="" type="checkbox"/> CREATE PROCEDURE
<input type="checkbox"/> CREATE PUBLIC SYNONYM	<input type="checkbox"/> CREATE ROLE	<input checked="" type="checkbox"/> CREATE SEQUENCE
<input type="checkbox"/> CREATE SYNONYM	<input checked="" type="checkbox"/> CREATE TABLE	<input checked="" type="checkbox"/> CREATE TRIGGER
<input type="checkbox"/> CREATE TYPE	<input checked="" type="checkbox"/> CREATE VIEW	

[Check All](#) [Uncheck All](#)

Verify Oracle Client Installation

Go to Add or Remove Programs in the Control Panel and verify the Oracle Client 10g Express Edition is installed as shown in the following illustration:

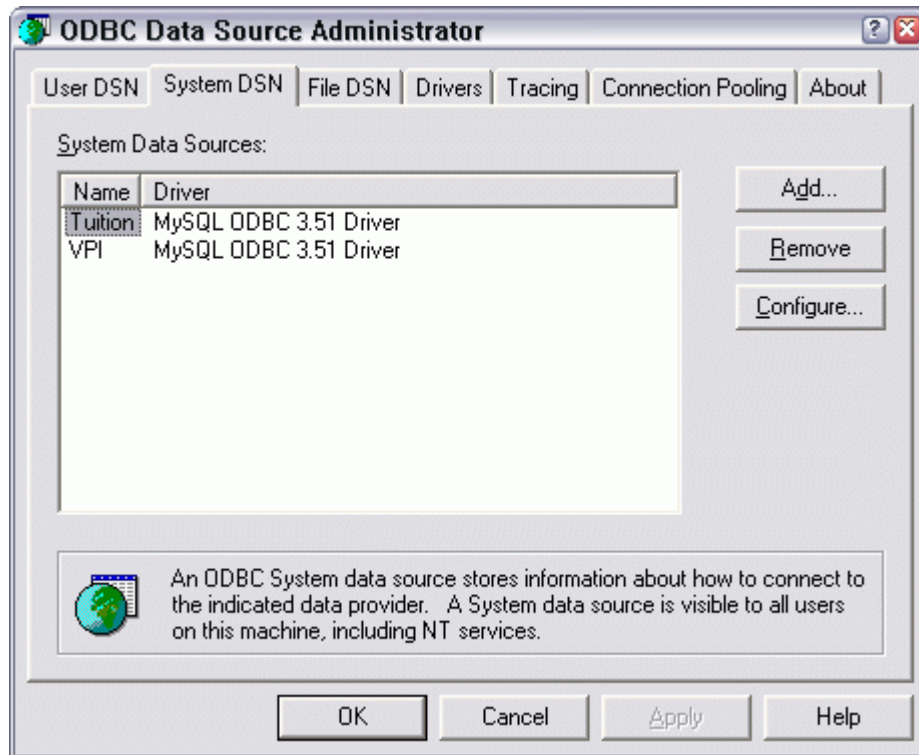


If the client is not installed, download it from this web page:

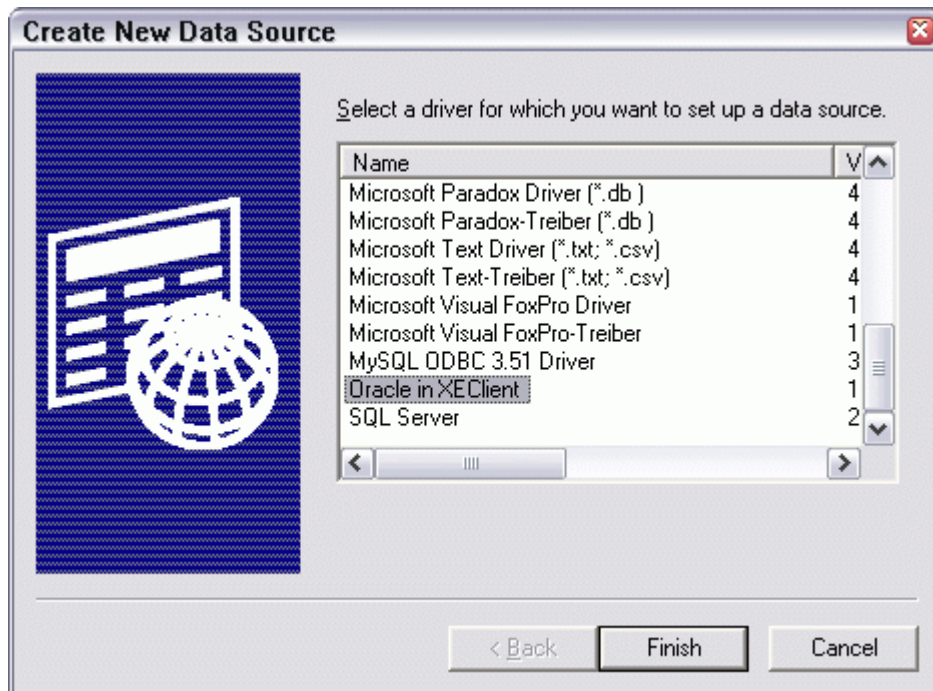
<http://www.oracle.com/technology/products/database/xe/index.html>

Install System Data Source

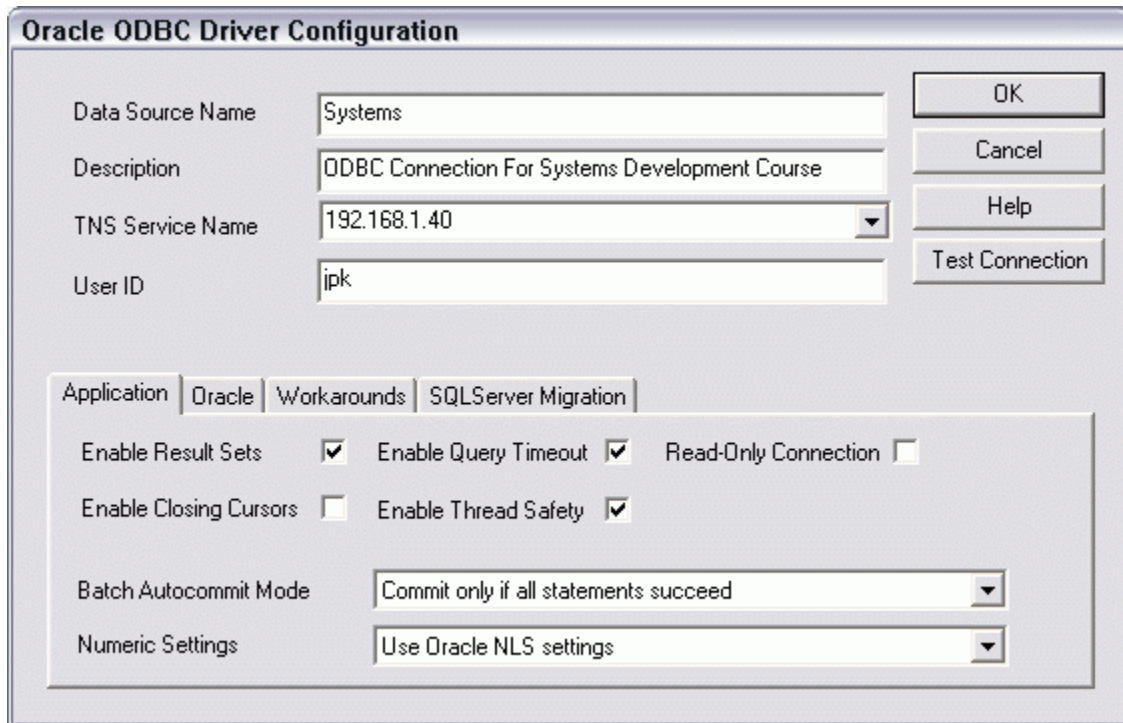
For each Windows computer connecting to the Oracle XE server, install a system ODBC data source. First, go to Control Panel, Administrative Tools, Data Sources (ODBC). Then click on the System DSN tab:



Click the Add... button and then select the Oracle in XEClient driver. Then click Finish:

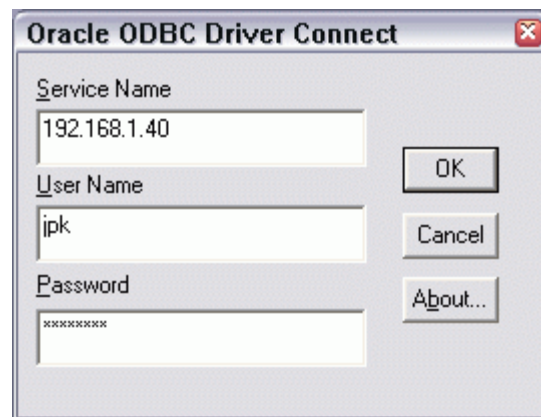


The Oracle ODBC Driver Configuration screen appears. Enter Systems for the DSN, a comment for the Description, the IP address of the Oracle XE server (or its computer name) for the TNS Service Name, and then an account for the User ID:



The screenshot shows the 'Oracle ODBC Driver Configuration' dialog box. It has four input fields: 'Data Source Name' with 'Systems', 'Description' with 'ODBC Connection For Systems Development Course', 'TNS Service Name' with '192.168.1.40', and 'User ID' with 'jpk'. On the right side, there are four buttons: 'OK', 'Cancel', 'Help', and 'Test Connection'. Below these fields is a tabbed interface with 'Oracle' selected. Under the 'Oracle' tab, there are several options: 'Enable Result Sets' (checked), 'Enable Query Timeout' (checked), 'Read-Only Connection' (unchecked), 'Enable Closing Cursors' (unchecked), and 'Enable Thread Safety' (checked). At the bottom, there are two dropdown menus: 'Batch Autocommit Mode' set to 'Commit only if all statements succeed' and 'Numeric Settings' set to 'Use Oracle NLS settings'.

Click the Test Connection button. Enter a password when prompted and click the OK button:



The screenshot shows the 'Oracle ODBC Driver Connect' dialog box. It has three input fields: 'Service Name' with '192.168.1.40', 'User Name' with 'jpk', and 'Password' with '*****'. On the right side, there are three buttons: 'OK', 'Cancel', and 'About...'.

Verify the connection works, then press OK on the configuration screen. Note the password is NOT stored.

The new data source should appear in the System DSN list. Click OK on this screen as well. This completes all administrative tasks.

Student Tasks

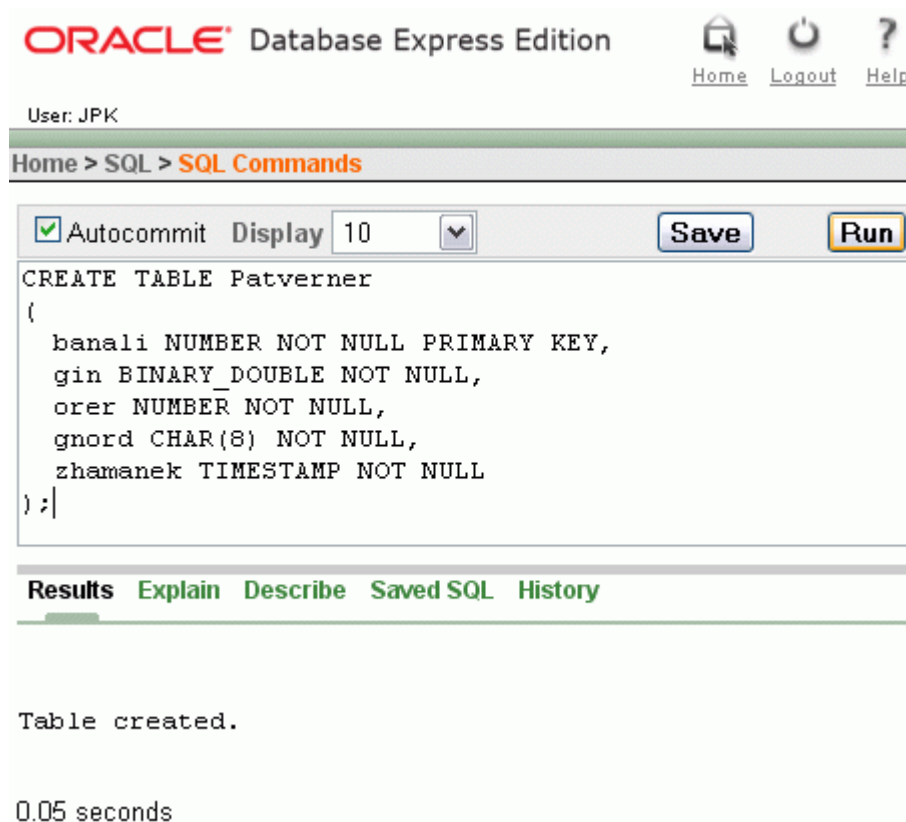
Each group is responsible for completing the following tasks and verifying the connection between Oracle XE and Access works.

New Oracle Table

Create a new, empty Oracle table using the SQL Editor. Start a browser and enter the following URL:

`http://<xeserver>:8080/apex`

Substituting <xeserver> with the name or IP address of the Oracle XE Server. Then start the SQL Commands page and execute the CREATE TABLE command exactly as shown:



The screenshot displays the Oracle Database Express Edition interface. At the top, it says "ORACLE Database Express Edition" with navigation links for Home, Logout, and Help. The user is identified as "User: JPK". The breadcrumb trail shows "Home > SQL > SQL Commands". The interface includes a toolbar with "Autocommit" checked, a "Display" dropdown set to "10", and "Save" and "Run" buttons. The main text area contains the following SQL command:

```
CREATE TABLE Patverner
(
  banali NUMBER NOT NULL PRIMARY KEY,
  gin BINARY_DOUBLE NOT NULL,
  orer NUMBER NOT NULL,
  gnord CHAR(8) NOT NULL,
  zhamanek TIMESTAMP NOT NULL
);|
```

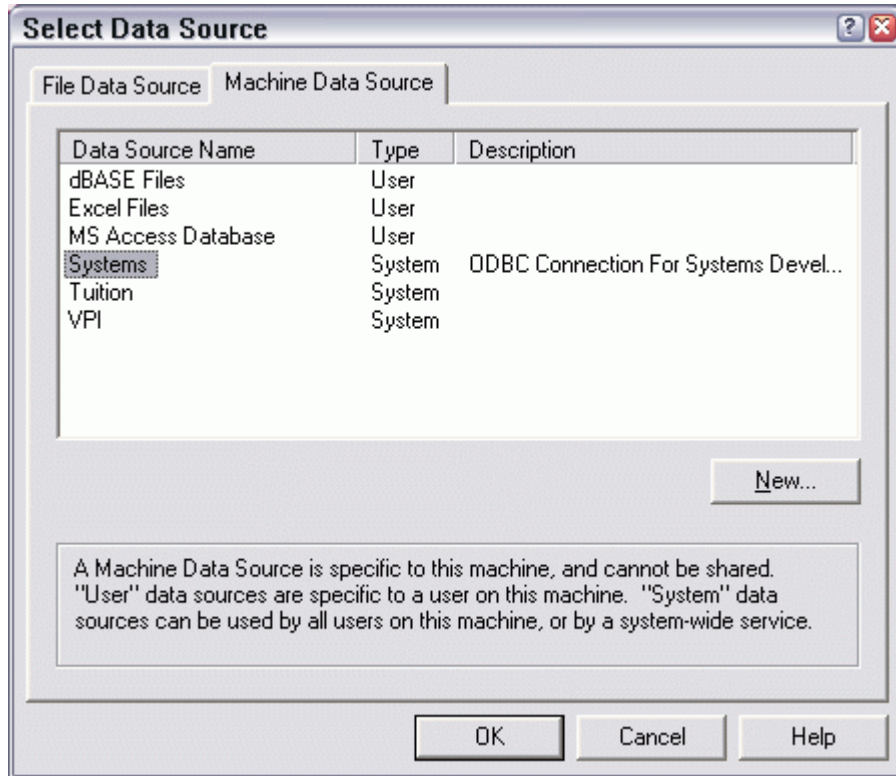
Below the text area, there are tabs for "Results", "Explain", "Describe", "Saved SQL", and "History". The "Results" tab is active, showing the output "Table created." and the execution time "0.05 seconds".

Blank Access Test Database

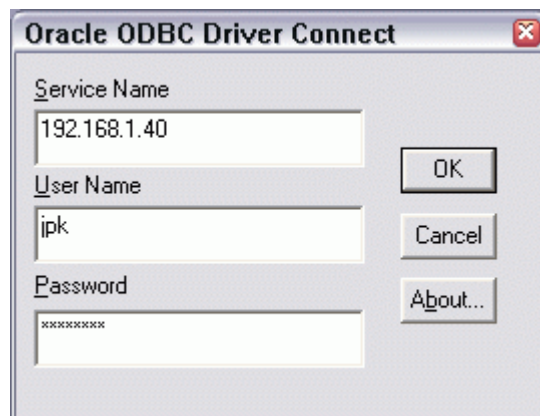
Create a new database in Access for testing purposes. Use the File -> New command in Access for this purpose.

Link Oracle Table In Access

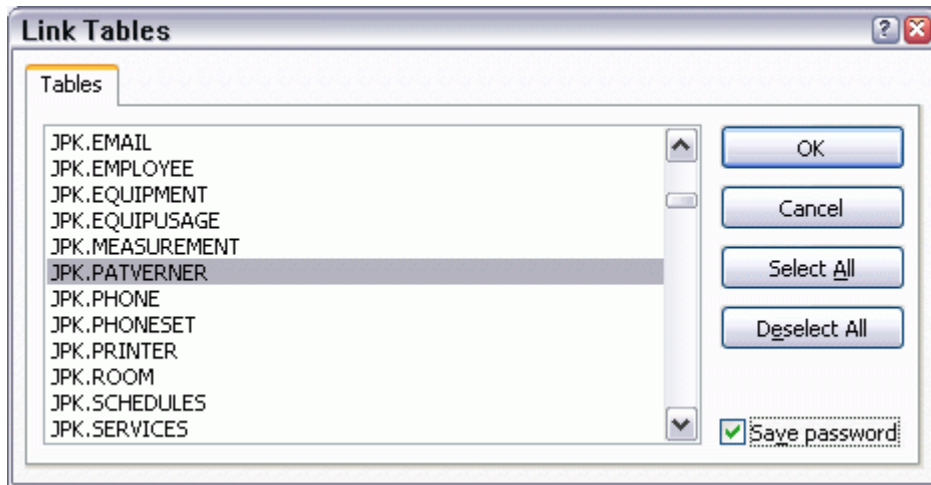
Use File -> Get External Data -> Link Tables... in Access to connect with Oracle. First, set the file type to ODBC Data Sources (last in the list) to get this screen:



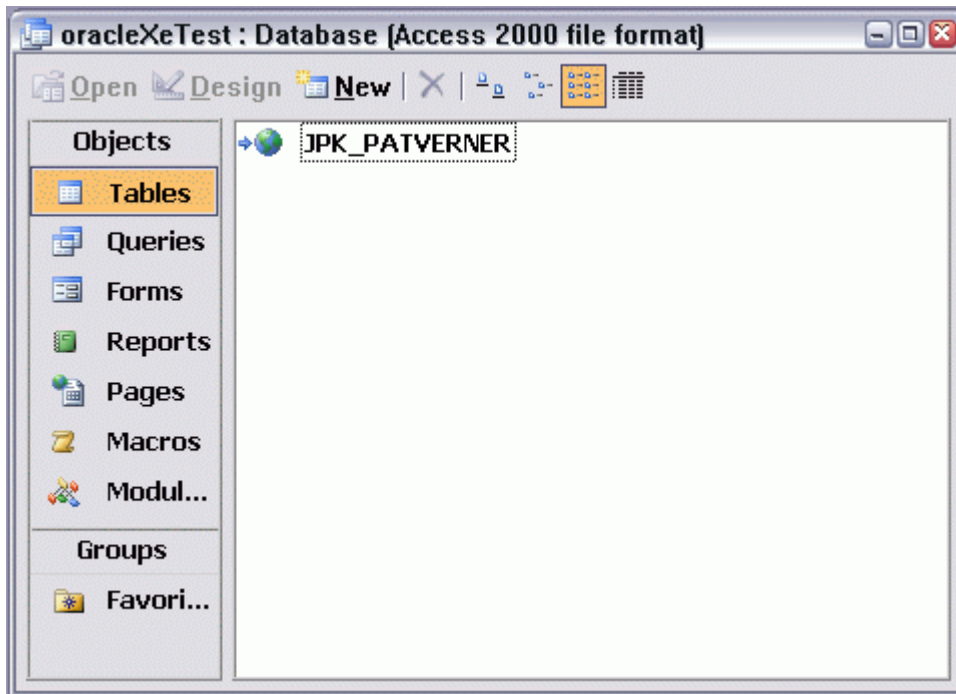
Click on the Systems DSN and then click OK. Enter the group's account and password as shown in the following screen:



Click the OK button. After a short while, all Oracle tables appear in the list. Select the Patverner table the group's account. Check Save Password if desired, then click OK:

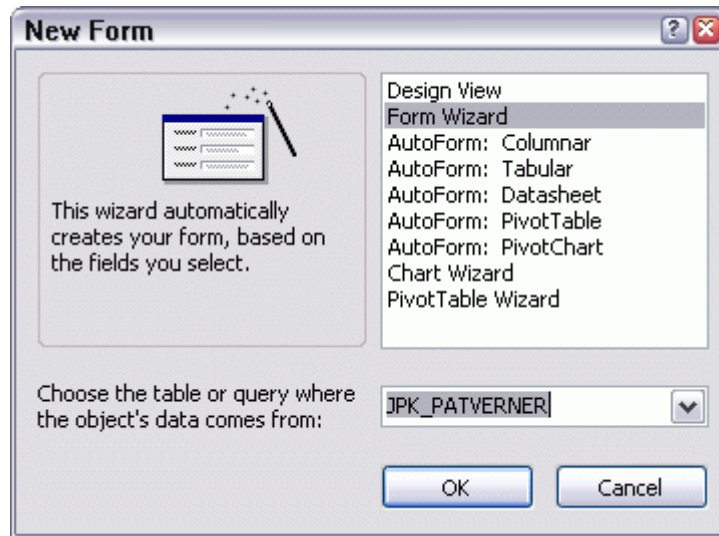


The table link should show up with a globe icon in Access:



Create A Data Entry Form

Access can automatically create a data entry form using a wizard. Under the Forms tab, click New and then start the New Form wizard as follows:



Test the resulting form, making sure one can add, modify, and delete records in the table:



This completes all student tasks.