Oracle Database 10g Express Edition Demo Scenario
by Artem Chebotko

1. Installing and configuring Oracle Database
Go to http://www.oracle.com/technology/products/database/xe/index.html, download and install
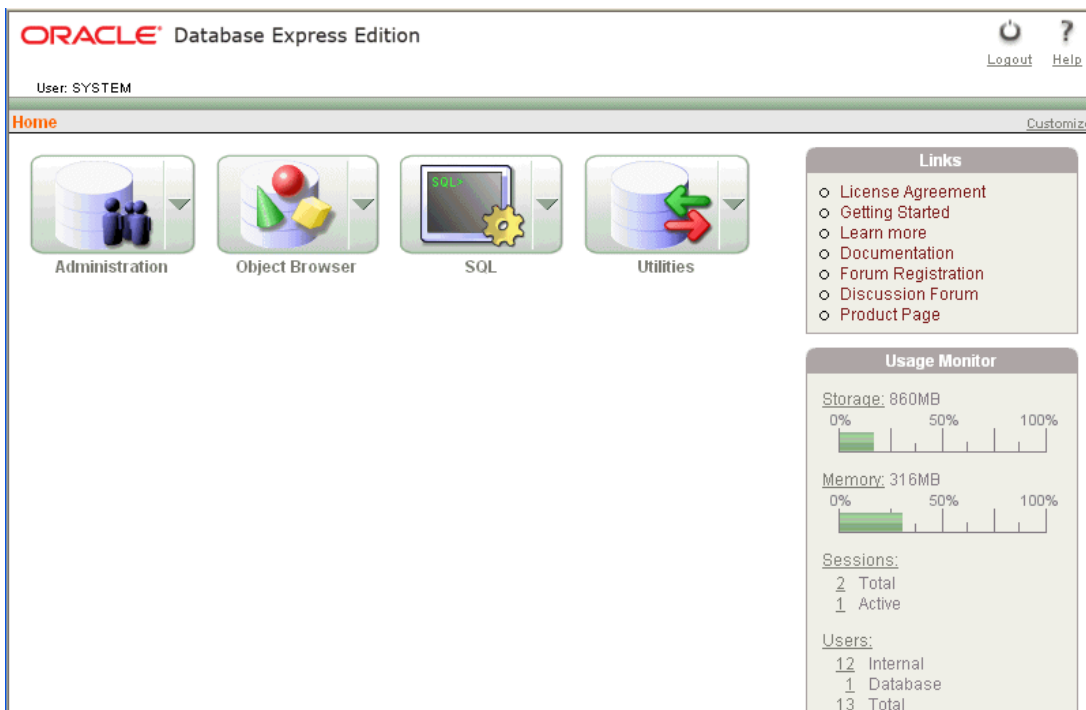Oracle Database Express Edition (most recent version available):
- Follow the installation instructions
- When prompted for a password for SYS and SYSTEM accounts, please enter "dba".

2. Logging in as the Database Administrator

The first thing you need to do is to log in as the Oracle Database XE Administrator. Follow these
steps:

1. Open the Database Home Page login window:
   - On Windows, from the **Start** menu, select **Programs** (or **All Programs**), then
     Oracle Database 10g Express Edition, and then **Go To Database Home Page**.
   - On Linux, click the **Application** menu (on Gnome) or the **K** menu (on KDE), then
     point to **Oracle Database 10g Express Edition**, and then **Go To Database Home
     Page**.
2. At the Database Home Page login window, enter the following information:
   - **Username:** Enter system for the user name.
   - **Password:** Enter the password that was specified when Oracle Database XE was
     installed.
3. Click **Login**.

   The Oracle Database XE home page appears.

3. Creating a new account

Select "Administration/Database Users/Create User" via the Oracle Database XE home page.
Add an account scott/tiger with all the privileges checked.
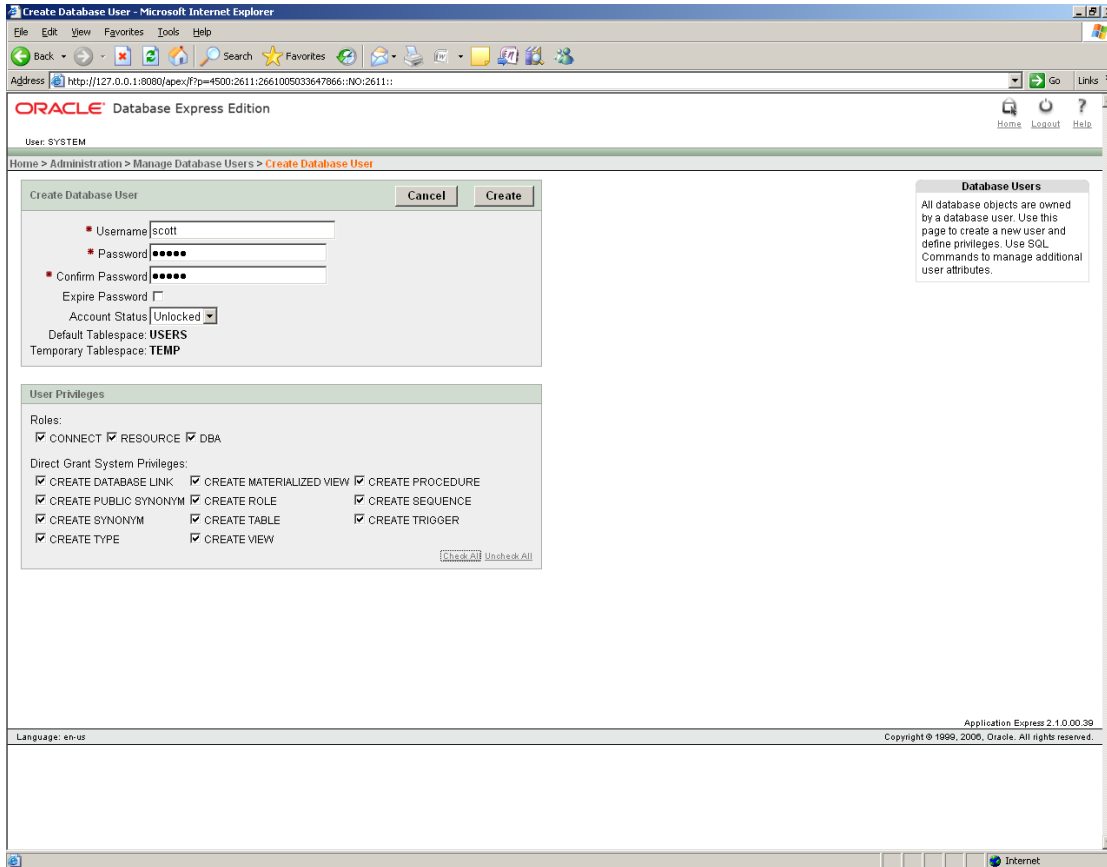
Note that you can continue to use the Web-based interface. Check the following tutorial
http://st-curriculum.oracle.com/tutorial/DBXETutorial/index.htm

4. Using the Oracle SQL*Plus client to execute SQL statements
Open a command line tool and start the SQL*Plus client with the command *sqlplus*. The client will prompt:

```
SQL*Plus: Release 10.2.0.1.0 - Production on Wed Feb 18 14:06:37 2009

Copyright (c) 1982, 2005, Oracle.  All rights reserved.

Enter user-name: scott
Enter password:

Connected to:
Oracle Database 10g Express Edition Release 10.2.0.1.0 - Production

SQL>
```

Important Note: we logged in as "scott/tiger".

Enter the following SQL statements one by one (letter case is not important) and understand the result of their execution:

```
-    SELECT USERNAME FROM ALL_USERS;
-    SELECT TABLE_NAME FROM USER_TABLES;
-    SELECT TABLE_NAME FROM ALL_TABLES WHERE OWNER='scott';
-    CREATE TABLE Student (id INT PRIMARY KEY, name VARCHAR(30) NOT NULL, age INT);
-    SELECT TABLE_NAME FROM USER_TABLES;
-    DESCRIBE Student;
-    SELECT * FROM Student;
-    INSERT INTO Student VALUES (1,'Edgar Codd', 20);
-    SELECT * FROM Student;
-    INSERT INTO Student (age, name, id) VALUES (21,'Jim Gray', 2);
-    SELECT * FROM Student;
-    INSERT INTO Student (name, id) VALUES ('John Smith', 3);
-    SELECT * FROM Student;
-    INSERT INTO Student VALUES (1,'Lily Smith', 28);
-    SELECT * FROM Student;
-    -- try to insert other tuples that violate integrity constraints
-    DELETE FROM Student WHERE age IS NULL;
-    SELECT * FROM Student;
-    UPDATE Student SET age = 79 WHERE name = 'Edgar Codd';
-    SELECT * FROM Student;
-    UPDATE Student SET age = NULL WHERE id = 1;
-    SELECT * FROM Student;
-    -- learn about different SQL*Plus settings;
-    SHOW ALL;
-    ---------
-    COMMIT; -- Commit everything (transaction) we executed before
-    SELECT * FROM Student;
-    INSERT INTO Student VALUES (100,'ABC', 100);
-    INSERT INTO Student VALUES (200,'ABC', 100);
-    SELECT * FROM Student;
-    ROLLBACK; -- rollbacks the transaction
-    SELECT * FROM Student;
-    -- try other SQL statements that we studied (e.g., CREATE VIEW, CREATE INDEX, etc.)
-    QUIT; -- This is SQL*Plus command (not an SQL statement)
```

Refer to "SQL*Plus® User's Guide and Reference"
(http://download.oracle.com/docs/cd/B19306_01/server.102/b14357/toc.htm) to learn more about the SQL*Plus utility.

5. Executing an SQL script
Refer to "SQL*Plus User's Guide and Reference"
(http://download.oracle.com/docs/cd/B19306_01/server.102/b14357/toc.htm)

6. Exploring the physical data level of DBMS Oracle Database
Go to the folder *C:\oraclexe\app\oracle\product\10.2.0\server\BIN* using your favorite file manager software and find various utilities to work with the DBMS, including *sqlplus.exe*.
Go to the folder *C:\oraclexe\oradata\XE* using your favorite file manager software and find several database files (.DBF). Each file corresponds to a tablespace, e.g.,

- SYSTEM tablespace contains the system catalogs, stored PL/SQL programs (i.e., triggers)
- USER tablespace stores user data, such as our table Student
- TEMP tablespace is used for temporary storage; for example, for sorts and intermediate results of ORDER BY, GROUP BY, joins and index creation

7. Exploring the system catalog
You need to be logged in as SYS or SYSTEM to see the system catalog tables and views. For example, locate view ALL_TABLES in the Object Browser the Oracle Database XE home page and check tab "Dependencies".