REPLACEMENT FOR EXERCISE 31.3:

(Phone Book Web Service) Create a web service that stores phone book entries in the database PhoneBookDB and a web client application that consumes this service. Use the steps in Section 30.2.1 to create the PhoneBook database. The database contains one table—**PhoneBook**—with three columns—**LastName**, **FirstName** and **PhoneNumber**—each of type **VARCHAR**. The **LastName** and **FirstName** columns store up to 30 characters. The **PhoneNumber** column should support phone numbers of the form (800) 555-1212 that contain 14 characters.

Give the client user the capability to enter a new contact (web method **addEntry**) and to find contacts by last name (web method **getEntries**). Pass only **String**s as arguments to the web service. The **getEntries** web method should return an array of **String**s that contains the matching phone book entries. Each **String** in the array should consist of the last name, first name and phone number for one phone book entry. These values should be separated by commas.

The **SELECT** query that will find a **PhoneBook** entry by last name should be:

```
SELECT LastName, FirstName, PhoneNumber
FROM PhoneBook
WHERE (LastName = LastName)
```

The **INSERT** statement that inserts a new entry into the **PhoneBook** database should be:

```
INSERT INTO PhoneBook (LastName, FirstName, PhoneNumber)
VALUES (LastName, FirstName, PhoneNumber)
```

[Note: Here is the SQL code to create the database]

```
DROP TABLE PhoneBook;
CREATE TABLE PhoneBook
(
    FirstName VARCHAR (50) NOT NULL,
    LastName VARCHAR (50) NOT NULL,
    PhoneNumber VARCHAR (50) NOT NULL
);
INSERT INTO PhoneBook (FirstName,LastName,PhoneNumber)
    VALUES ('Bob', 'Green', '5555551111'),
           ('Sue', 'Black', '5555552222'),
           ('Liz', 'White', '5555553333'),
           ('Paul', 'Blue', '5555554444')
```

REPLACEMENT FOR EXERCISE 31.4:

(Phone Book Web Service Modification) Modify Exercise 31.3 so that it uses a class named **PhoneBookEntry** to represent a row in the database. The client application should provide objects of type **PhoneBookEntry** to the web service when adding contacts and should receive objects of type **PhoneBookEntry** when searching for contacts.