INFS3204/7204 Practical 3 – ADO.NET

Note that: for all practicals in this course, you need to submit your code in *a single zip file* to the blackboard, before you demonstrate your code to your tutor. Demonstration without submitting your code will be marked 0. The purpose of this is to detect any possible plagiarism.

The goal of this practical is to explore the traditional ADO.NET combined with .NET web services. All practicals will have to be developed with Microsoft Visual Studio 2010 using C# as the programming language. No other languages will be accepted. This practical contributes to 5% of your overall grade. You must present this practical to your lab tutor during your scheduled lab session in week 7. **You are not allowed to change your session.**

This practical is divided into four tasks:

- **Task 1: Creating a DatabaseService (3.5 Marks)**
- **Task 2: Modifying Add Contact page (0.5 Mark)**
- **Task 3: Modifying Search Contact page (0.5 Mark)**
- **Task 4: Creating a Birthday Reminder page (0.5 Mark)**

Preparation

You are assumed to have completed Practical 2. This practical extends what you have already done in Task 2 of Practical 2, and you are required to use SQL in the traditional ADO.NET. You are also required to create your own database using the built-in Database Management Studio in Microsoft Visual Studio (Please watch the tutorial video for Practical 3 before attempting to do this practical at http://itee.uq.edu.au/~shenht/P3video.mp4). You can create the database before any coding is done (You do not have to create table(s) programmatically). You can create a single table (called Contact) in your database for Contacts.

A Phonebook/Birthday Reminder web application using the traditional ADO.NET

For this practical, you are only allowed to use **SQL Queries** in the ADO.NET for database communications. You need to make the following modifications to the Task 2 of Practical 2 (all other requirements are the same as in practical 2).

Task 1: Creating a DatabaseService (3.5 Marks)

Create a new Web Service called **DatabaseService**, which should have the following Web Methods:

- **FullnameExists (0.5 Mark)**: checks if a contact with the received fullname (firstname + lastname) already exists in the database

- **PhoneExists (0.5 Mark)**: checks if the phone number already exists in the database
- **SaveContact (0.5 Mark)**: adds the new contact information into the database
- **GetContact (0.5 Mark)**: gets the contact information from the database
- **UpdateContact (0.5 Mark)**: updates the contact information in the database
- **RemindBirthday (1 Mark):** gets current date (**please note** that only day and month properties of the current date are useful for this practical), and returns those contacts' information (firstname + lastname + email) whose birthday is today.

Task 2: Modifying Add Contact page (0.5 Mark)

Include the following additional information in the Add Contact page that you have created in practical 2:

- Title (Drop down list, required field)
- Comment (Text box, to add any additional comments for the contact)
- Remind me of this birthday! (Checkbox, you also need to have an attribute (of any desirable type like **bit**) in the Contact table to indicate this)
- A button/link: to redirect user to the Search Contact page
- You **can** consider the date of birth, as three separate attributes (day, month, year) in the Contact table just to make things simplified. However, you can use any other ideas to implement this part.

Modify the Web Service for Add and Search Contact:

In the *AddContact* web method, you should invoke *ContactExists and PhoneExists* web methods from the DatabaseService to check if there is any existing contact with the same full name (firstname + lastname) or the same phone number.

If both or one of the full name or phone number have been saved previously, the database should not be modified and an error message should be returned to the user, specifying the contact already exists so that user can try to enter information for another contact.

If both full name and phone number do not exist in the database, the *AddContact* web method will then invoke the *SaveContact* web method from the DatabaseService to insert a new record into the database. A message will then be displayed to user, confirming that "The contact information has been saved successfully.". The user should then be able to enter another contact's information.

(Please don't forget that there should be a link/button in this page that can redirect user to the Search Contact page.)

Task 3: Modifying Search Contact page (0.5 Mark)

Change SearchByLastname web method in the Add and Search Contact web service to SearchByFullname web method so that it uses the FullnameExists and GetContact web methods in the DatabaseService to search and display

information for a contact with the specified fullname.

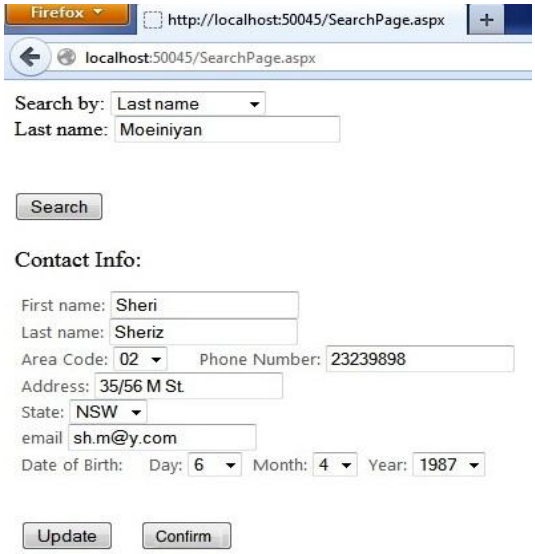
1. If a contact with the specified fullname exists, all the contact's information will be displayed in the same page (as you have done for practical 2). Additionally, you should also add the following options when displaying the contact information:
    - **Edit button** should also be displayed so that user can edit the fields by clicking on this button.
    - **Confirm button** should also be displayed so that the modified information can be updated in the database by invoking the UpdateContact web method from the DatabaseService.
2. If there is no contact with the specified fullname, an error message should be displayed.

(**Please note** that you need to follow the same thing for SearchByPhone web method of the Add and Search Contact web service so that it uses PhoneExists web method from DatabaseService.)

Your Search page should look like the example bellow:

Before pressing the Update button (**note** that the controls are not 'enabled'):

After pressing the Update button (**note** that the controls are 'enabled')



Task 4: Creating a Birthday Reminder page (0.5 Mark)

For this task, you need to create a Birthday Reminder page that uses the RemindBirthday web method of the DatabaseService to display those contacts whose birthday is today.

This page should be displayed to the user when your application page loads for the first time (make use of Page_Load event method). As a result, when your application page loads for the first time, if there exists any contact whose birthday is today, it redirects the user to the Birthday Reminder page and displays contact(s) information. Otherwise, it displays the Add Contact page.

There should be a button so that user can go to the Add Contact page from Birthday Reminder page.

Your Birthday Reminder page should look like the example bellow:


Firefox
Home Page
localhost:49158/Reminder.aspx
MY ASP.NET APPLICATION
Home
About
Upcoming birthdays:
Firstname: Sheri, Lastname: Sheri, email: sh@y.com
Firstname: Peri, Lastname: Peri, email: p@y.com