

## Exercise 5

# Phase 4. Final version with a remote connection

## 4.1. On the server side

### Step 1

In this phase we will develop a final version of the functions implementing the business logic and data access.

In the database of this example add a view ***BooksWithDescriptions***.

```
SELECT  Authors, Description, Title, ISBN
FROM    dbo.Titles
```

In the project eLibraryServer, class DAL add a function **getBookByISBN**:

```
public DataTable getBookByISBN(String pStrISBN)
{
    DataTable dt=new DataTable();
    SqlConnection connection=new SqlConnection();
    SqlCommand cmd=new SqlCommand();

    connection.ConnectionString =
eLibraryServer.Properties.Settings.Default.biblioConnectionString;

    try
    {
        using (connection)
        {
            connection.Open();
            cmd.Connection = connection;
            cmd.CommandText = "Select * from BooksWithDescriptions where ISBN='" + pStrISBN + "'";
            dt.Load(cmd.ExecuteReader());
        }
    }
    catch(SqlException e){ connection.Close();}
    return dt;
}
```

## 4.2. On the client side

### Step 1

- Add a new form, Windows Form type - frmSelectedBook, for displaying data for the selected book.
- Insert a button [OK] to close the form;
- Add four labels.
  - lblISBN           text="ISBN"
  - lblTitle         text="Title"
  - lblAuthors       text="Authors"
  - lblDescription   text="Description"
- Add four textboxes that will display corresponding attribute of the selected book:
  - txtISBN (size - 9)
  - txtTitile (size – 9, multiline, bold)

- txtAuthors (size - 9)
- txtDescription (size – 9, multiline)

- Add a public variable **SelectedISBN**.

```
public string SelectedISBN
```

- in the function of the event **load**, add the following code for reading the SelectedISBN and assign the value from the text box txtISBN.

```
private void frmSelectedBook_Load(object sender, EventArgs e)
{
    eLibraryServer.DAL oDAL = new eLibraryServer.DAL();
    DataTable dt = new DataTable();
    DataRow row1;
    this.txtISBN.Text = SelectedISBN;
    dt = oDAL.getBookByISBN(SelectedISBN);
    row1 = dt.Rows[0];
    txtTitle.Text = row1["Title"].ToString();
    txtAuthors.Text = row1["Authors"].ToString();
    txtDescription.Text = row1["Description"].ToString();
}
```

## Step 2

In the form **frmBooks**,

- add a function to **DataGridView1** event **RowHeaderMouseDoubleClick**, which will open a new dialog form **frmSelectedBook**.

```
private void dataGridView1_RowHeaderMouseDoubleClick(object sender, DataGridViewCellMouseEventArgs e)
{
    frmSelectedBook.SelectedISBN = dataGridView1.SelectedRows[0].Cells[0].Value.ToString();
    frmSelectedBook frm=new frmSelectedBook();
    frm.ShowDialog();
}
```

Run the program and see the result. The new form looks as follows:

The screenshot shows a Windows dialog box titled "SelectedBook". It contains a list of book details:
 

- ISBN:** 0-0235185-1-0
- Title:** Database Analysis and Design
- Authors:** Van Halteren, Hans; Hawryszkiewicz, I.T.;
- Description:** With this book, you learn by doing, getting your feet wet immediately as you progress through a series of hands-on projects that build on your growing knowledge. Simple step-by-step instructions, review questions at the end of each chapter, and a companion CD with all of the project files make learning easy.

 An "OK" button is located at the bottom right of the dialog.