

## Exercise 2

### Phase 2. Prototype with a local connection (eLibrary\_v2)

Make a copy of the entire folder eLibrary\_v1 and rename it as eLibrary\_v2. Open the new project folder.

#### 2.1. On the server side: Creating a Dataset

##### Step 1

Add a new dataset in the project eLibraryServer: - “**biblioDataSet**”

##### Step 2

In the panel Server Explorer: add a connection to the file **biblio.mdf** (**Data> Add New Datasource**, select Microsoft SQL server Database File)

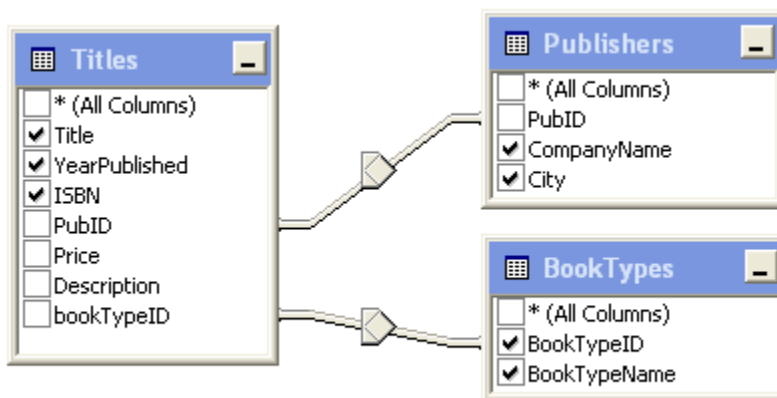
*Note: If the database is not in the project and the system asks you to copy biblio.mdf file in the project, reply yes.*

##### Step 3

The database contains 3 tables:

**Titles, Publishers, BookTypes**

Create a view **Books** in the database.



##### Step 4

In biblioDataSet: Drag and drop the object from the **.MDF file** in biblioDataSet:

## Step 5

Add the function *getELibraryDataSet()* in the empty class DAL:

```
public DataSet getELibraryDataSet()
{
    biblioDataSet ds = new biblioDataSet();
    biblioDataSetTableAdapters.BooksTableAdapter booksTA=new biblioDataSetTableAdapters.BooksTableAdapter();
    booksTA.Fill(ds.Books);

    biblioDataSetTableAdapters.BookTypesTableAdapter bookTypesTA=new biblioDataSetTableAdapters.BookTypesTableAdapter();
    bookTypesTA.Fill(ds.BookTypes);

    return ds;
}
```

## 2. From the client side: Connect to the server module

### Step 1

In the form frmMain:

- Define a public variable:  
`public DataSet dsELibrary;`
- Set the **Enabled** property to **false** to menu mnuBooks:  
`mnuBooks.Enabled = false;`
- Add the following code to mnuConectToServer\_Click:

```
private void mnuServer_Click(object sender, EventArgs e)
{
    // MessageBox.Show("Function is not ready!");
    if (dsELibrary == null)
    {
        eLibraryServer.DAL oDAL = new eLibraryServer.DAL();

        try
        {
            dsELibrary = oDAL.getELibraryDataSet();
            MessageBox.Show("Server connected");
        }
        catch (Exception ex)
        {
            MessageBox.Show(ex.Message, "Error by connecting eLibrary Server", MessageBoxButtons.OK, MessageBoxIcon.Stop);
        }
        mnuBooks.Enabled = true;
    }
    else
    {
        MessageBox.Show("The eLibrary Server is already connected", "", MessageBoxButtons.OK, MessageBoxIcon.Information);
    }
}
```

## Step 2

In the form frmBooks

- Fill the list with booktypes by a method for handling event **Load**

```
private void frmBooks_Load(object sender, EventArgs e)
{
    // fill the list with booktypes
    listBookTypes.DataSource = frmMain.dsELibrary.Tables["BookTypes"];
    listBookTypes.DisplayMember = "BookTypeName";
    listBookTypes.ValueMember = "BookTypeName";
    listBookTypes.SelectedIndex = -1;
}
```

- Add a method for the **SelectedIndexChanged** event on **listBookTypes** to display the selected values – Refreshing gridview content.

```
private void listBookTypes_SelectedIndexChanged(object sender, EventArgs e)
{
    String strValue="";
    Int32 iValue;
    if (listBookTypes.SelectedIndex >= 0)
    {
        strValue = listBookTypes.SelectedValue.ToString();
        iValue = listBookTypes.SelectedIndex + 1;
        lblBookTypes.Text = "Selected category: " + strValue;
        frmMain.dsELibrary.Tables["Books"].DefaultView.RowFilter = "BookTypeID = " + iValue.ToString();
        dataGridView1.DataSource = frmMain.dsELibrary.Tables["Books"].DefaultView;
    }
    else if (listBookTypes.SelectedIndex == -1)
    {
        lblBookTypes.Text = "Selected category: " + strValue;
    }
}
```

