Laboratory 3 - Exercises.

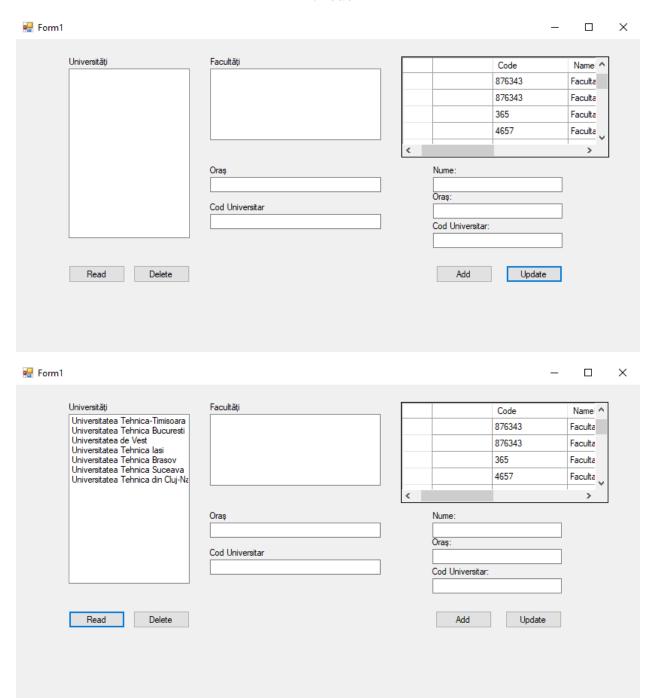
```
SqlConnection connection = new SqlConnection(
"Data Source=127.0.0.1,1433;Initial Catalog=Lab3-II;Persist Security Info=True;User ID=s
                   InitializeComponent();
             private void listBoxUniv_SelectedIndexChanged(object sender, EventArgs e)
                    connection.Open();
SqlCommand comm = new SqlCommand(
"SELECT * FROM dbo.Facultati JOIN dbo.Universitati ON dbo.Universitati.Code = dbo.Facultati
ti.Code WHERE dbo.Universitati.Code = dbo.Facultati.Code AND dbo.Universitati.NameUniv =
\'" + listBoxUniv.SelectedItems[0].ToString() + "\'", connection);
SqlDataReader reader = comm.ExecuteReader();
                    listBoxFac.BeginUpdate();
                    listBoxFac.Items.Clear();
                    while (reader.Read())
                          listBoxFac.Items.Add(reader["NameFac"].ToString());
textBox2Oras.Text = reader["City"].ToString();
textBox1CU.Text = reader["Code"].ToString();
                    listBoxFac.EndUpdate();
             private void delete_Click(object sender, EventArgs e)
                    string univname = listBoxUniv.SelectedItem.ToString();
SqlCommand comm = new SqlCommand(
"DELETE FROM dbo.Universitati WHERE NameUniv=@NameUniv", connection);
comm.Parameters.AddWithValue("@NameUniv", univname);
                   comm.ExecuteNonQuery();
                    buttonRead_Click(sender, e);
             private void add_Click(object sender, EventArgs e)
                    connection.Open();
                    int lastid = (int)comm1.ExecuteScalar();
                    int newid = lastid + 1;
                   comm.Parameters.AddWithValue("@id", newid);
comm.Parameters.AddWithValue("@NameUniv", textBoxName.Text);
comm.Parameters.AddWithValue("@City", textBoxCity.Text);
comm.Parameters.AddWithValue("@Code", textBoxCU.Text);
                    comm ExecuteNonQuery();
                    buttonRead_Click(sender, e);
```

```
private void update_Click(object sender, EventArgs e)
    string univname = listBoxUniv.SelectedItem.ToString();
string newName = textBoxName.Text;
    string city = textBoxCity.Text;
string code = textBoxCU.Text;
    connection.Open();
    SqlCommand comm = new SqlCommand(
"UPDATE dbo.Universitati SET dbo.Universitati.NameUniv = @NameUniv, City=@City, Code=@Cod
e WHERE NameUniv=@SelectedName"
    comm.Parameters.AddWithValue("@SelectedName", univname);
    comm.Parameters.AddWithValue("@NameUniv", newName);
    comm.Parameters.AddWithValue("@City", city);
    comm.Parameters.AddWithValue("@Code", code);
    comm.ExecuteNonQuery();
    connection.Close();
    listBoxUniv.Items.Clear();
    buttonRead_Click(sender, e);
private void buttonRead_Click(object sender, EventArgs e)
    connection.Open();
    SqlCommand comm = new SqlCommand("SELECT * FROM dbo.Universitati", connection);
    SqlDataReader reader = comm.ExecuteReader();
    while (reader.Read())
         listBoxUniv.Items.Add(reader["NameUniv"].ToString());
    connection.Close();
private void dataGridView1_CellContentClick(object sender, DataGridViewCellEventArgs e)
    if (e.ColumnIndex = dataGridView1.Columns["Add"].Index 86 e.RowIndex ≥ 0)
        DataGridViewRow newRow = dataGridView1.Rows[e.RowIndex];
        int id = int.Parse(dataGridView1.Rows[e.RowIndex].Cells["id"].Value.ToString());
        string name = newRow.Cells["NameFac"].Value.ToString();
string code = newRow.Cells["Code"].Value.ToString();
             connection.Open();
SqlCommand comm = new SqlCommand(
"INSERT INTO dbo.Facultati (id,Code,NameFac) VALUES (@id,@Code,@NameFac)", connection);
             comm.Parameters.AddWithValue("@id", id);
             comm.Parameters.AddWithValue("@Code", code);
comm.Parameters.AddWithValue("@NameFac", name);
             comm.ExecuteNonQuery();
             connection.Close();
```

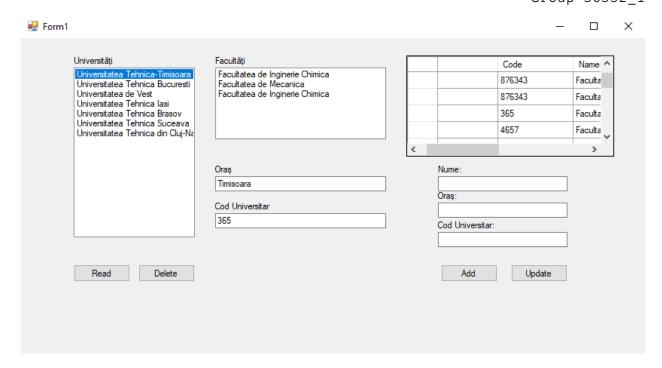
```
LoadViewGrid();
           else if (e.ColumnIndex == dataGridView1.Columns["Delete"].Index 86 e.RowIndex
> 0)
               int id = Convert.ToInt32(dataGridView1.Rows[e.RowIndex].Cells["id"].Value.
ToString());
              using (connection)
                  connection.Open();
                  SqlCommand comm = new SqlCommand("DELETE FROM Facultati WHERE id=@id"
, connection);
                  comm.Parameters.AddWithValue("@id", id);
                  comm.ExecuteNonQuery();
                  connection.Close();
               dataGridView1.Rows.RemoveAt(e.RowIndex);
               LoadViewGrid();
           private void LoadViewGrid()
           string conn
"Data Source=127.0.0.1,1433;Initial Catalog=Lab3-II;Persist Security Info=True;User ID=s
           SqlDataAdapter adapter = new SqlDataAdapter("SELECT * FROM Facultati", conn);
           DataSet dataSet = new DataSet();
           adapter.Fill(dataSet, "Facultati");
           dataGridView1.DataSource = dataSet.Tables["Facultati"];
           DataGridViewButtonColumn addButton = new DataGridViewButtonColumn();
           addButton.Name = "Add";
           addButton.HeaderText = "Add";
           addButton.Text = "Add";
           addButton.UseColumnTextForButtonValue = true;
           dataGridView1.Columns.Add(addButton);
           DataGridViewButtonColumn deleteButton = new DataGridViewButtonColumn();
           deleteButton.Name = "Delete";
           deleteButton.HeaderText = "Delete";
           deleteButton.Text = "Delete";
           deleteButton.UseColumnTextForButtonValue = true;
          dataGridView1.Columns.Add(deleteButton);
```

CRUD Operations:

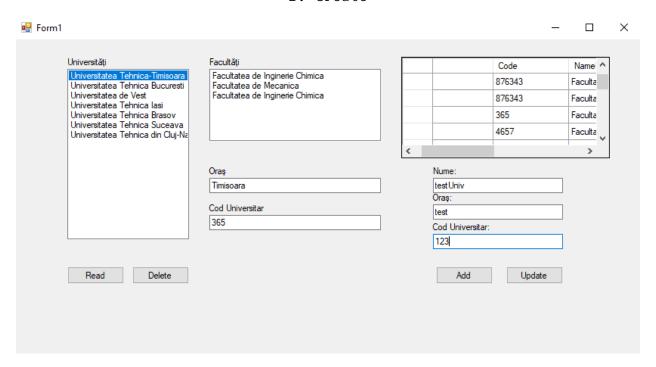
1.Read

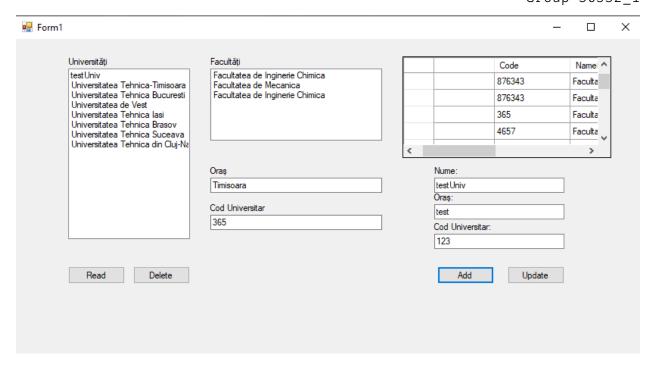


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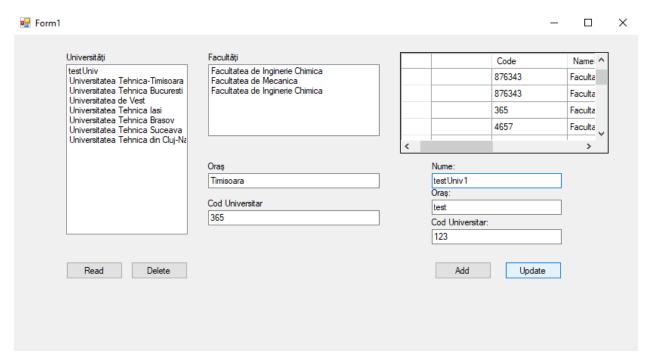


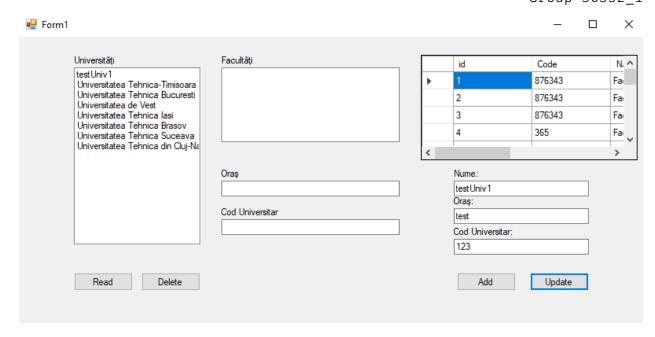
2. Create



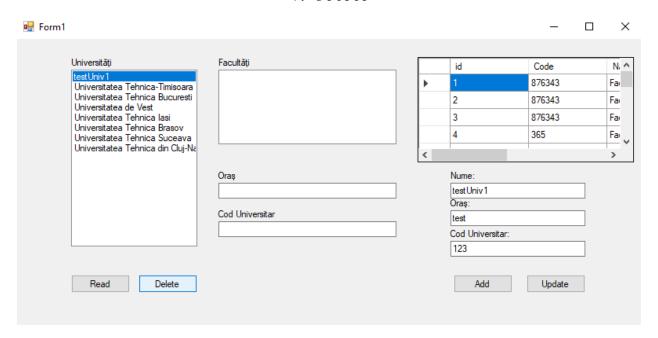


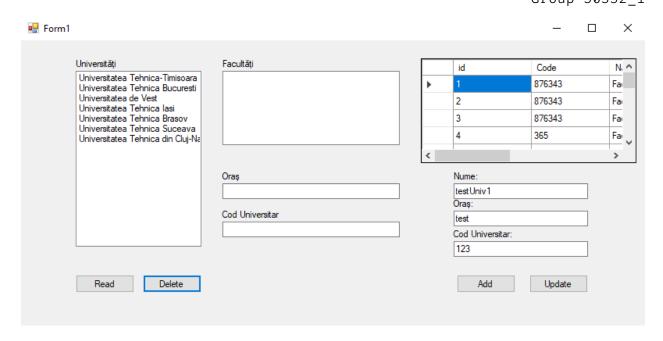
3. Update





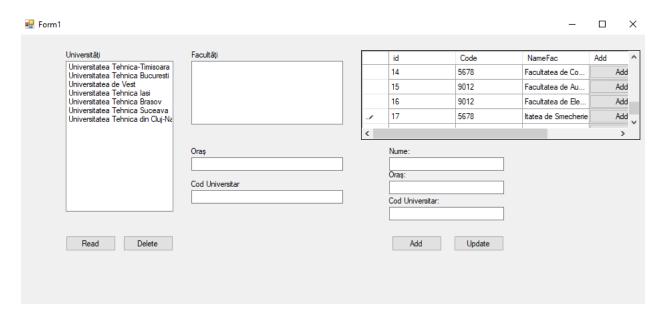
4. Delete

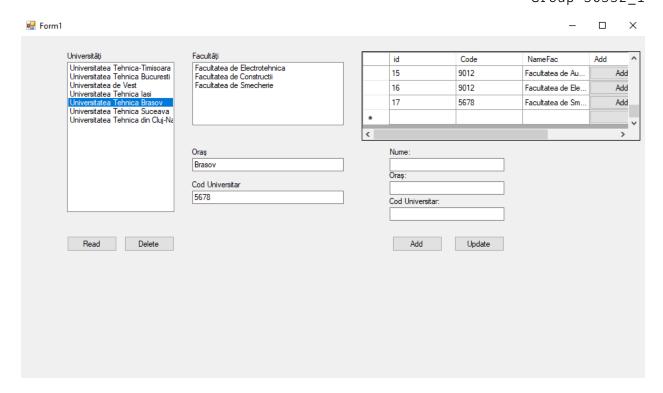




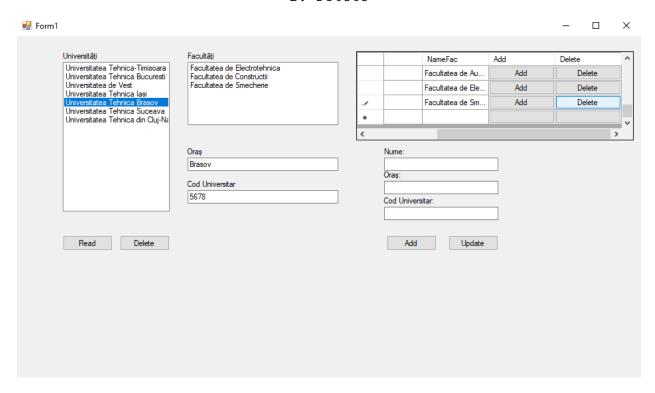
GRIDVIEW Exercise:

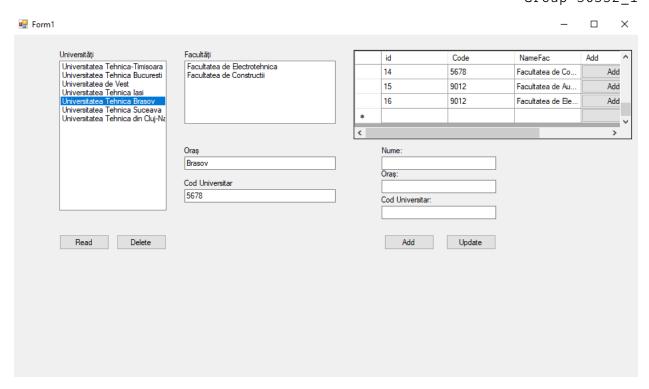
1.Add





2. Delete





The SQL Query that I used to create and populate the database:

```
USE [Lab3-II];
GO

DROP TABLE IF EXISTS Universitati
CREATE TABLE Universitati(
id INT NOT NULL,
NameUniv VARCHAR(45) NOT NULL,
City VARCHAR(45) NOT NULL,
Code INT NOT NULL,
CONSTRAINT PK_Unversitati PRIMARY KEY(Code))

GO

DROP TABLE IF EXISTS Facultati
CREATE TABLE Facultati(
id INT NOT NULL,
Code INT NOT NULL,
NameFac VARCHAR(100) NOT NULL,
```

```
CONSTRAINT FK Universitati FOREIGN KEY(Code) REFERENCES Universitati(Code))
GO
INSERT INTO Universitati VALUES (1,'Universitatea Tehnica', 'Cluj-Napoca', 876343)
INSERT INTO Universitati VALUES (2, 'Universitatea Tehnica Timisoara',
'Timisoara', 365)
INSERT INTO Universitati VALUES (3, 'Universitatea Tehnica Iasi', 'Iasi', 4657)
INSERT INTO Universitati VALUES (4, 'Universitatea Tehnica Bucuresti',
'Bucuresti', 1234)
INSERT INTO Universitati VALUES (5, 'Universitatea Tehnica Brasov', 'Brasov',
INSERT INTO Universitati VALUES (6, 'Universitatea Tehnica Suceava', 'Suceava',
INSERT INTO Universitati VALUES (7, 'Universitatea de Vest', 'Timisoara', 3456)
INSERT INTO Facultati VALUES(1, 876343, 'Facultatea de Automatica si
Calculatoare')
INSERT INTO Facultati VALUES(2, 876343, 'Facultatea de Electronica,
Telecomunicatii si Tehnlogia Informatiei')
INSERT INTO Facultati VALUES(3, 876343, 'Facultatea de Mecanica')
INSERT INTO Facultati VALUES(4, 365, 'Facultatea de Inginerie Chimica')
INSERT INTO Facultati VALUES(5, 4657, 'Facultatea de Electrotehnica')
INSERT INTO Facultati VALUES(6, 4657, 'Facultatea de Constructii')
INSERT INTO Facultati VALUES(7, 1234, 'Facultatea de Automatica si Calculatoare')
INSERT INTO Facultati VALUES(8, 1234, 'Facultatea de Electronica, Telecomunicatii
si Tehnlogia Informatiei')
INSERT INTO Facultati VALUES (9, 365, 'Facultatea de Mecanica')
INSERT INTO Facultati VALUES (10, 365, 'Facultatea de Inginerie Chimica')
INSERT INTO Facultati VALUES (11,3456, 'Facultatea de Automatica si Calculatoare')
INSERT INTO Facultati VALUES (12,3456, 'Facultatea de Electronica, Telecomunicatii
si Tehnlogia Informatiei')
INSERT INTO Facultati VALUES (13, 5678, 'Facultatea de Electrotehnica')
INSERT INTO Facultati VALUES (14, 5678, 'Facultatea de Constructii')
INSERT INTO Facultati VALUES (15, 9012, 'Facultatea de Automatica si
Calculatoare')
INSERT INTO Facultati VALUES (16, 9012, 'Facultatea de Electronica,
Telecomunicatii si Tehnlogia Informatiei')
```