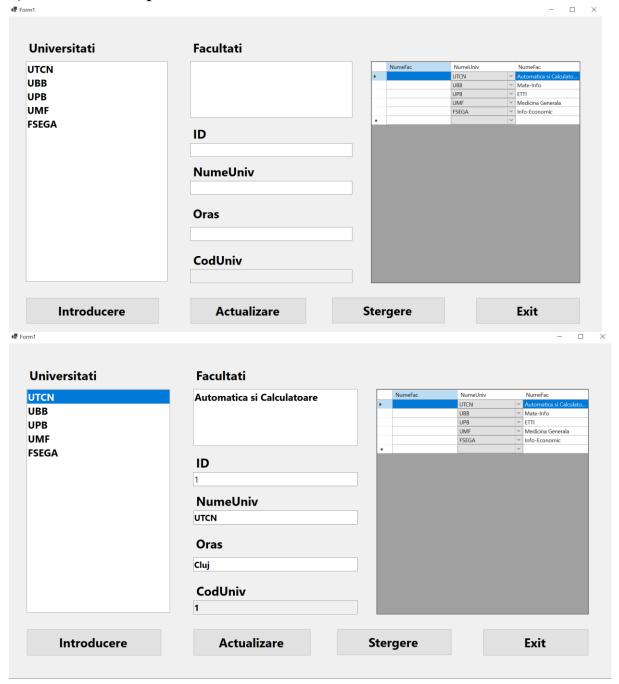
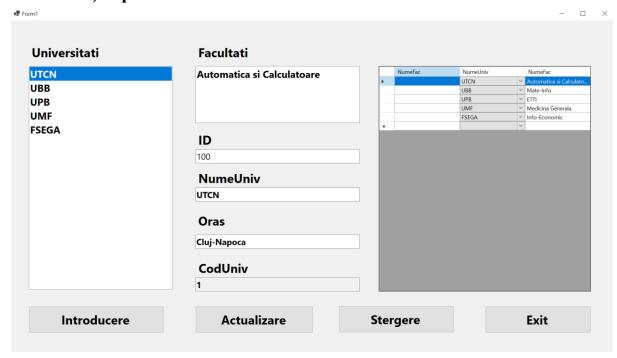
Tema – Lucrarea 3: Baze de date

- 1. Să se extindă aplicația precedentă, astfel încat să se poată efectua operații de inserare, ștergere și update pentru tabela Universitați. Infomațiile să poată fi introduse de la tastatură.
- 2. Să se adauge in proiect un dataGridView cu ajutorul căruia să se introducă date în tabela Facultații, iar la selectarea unui rând acesta să poată fi șters.

i) Interfata aplicatiei si rezultatele obtinute:



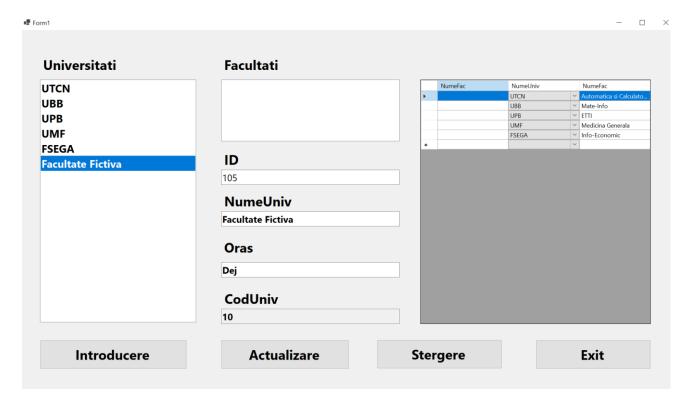
1) Operatia de actualizare:

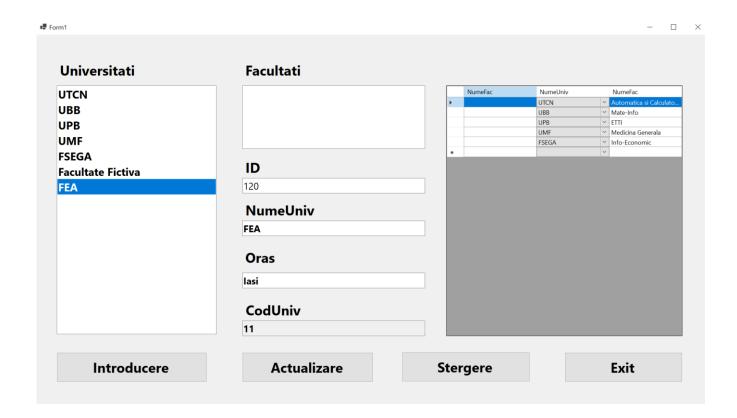


Cu ajutorul operatiei de actualizare putem acutualiza informatiile legate de fiecare facultate. In exemplu am actualizat ID-ul facultatii UTCN.

2) Operatia de introducere:

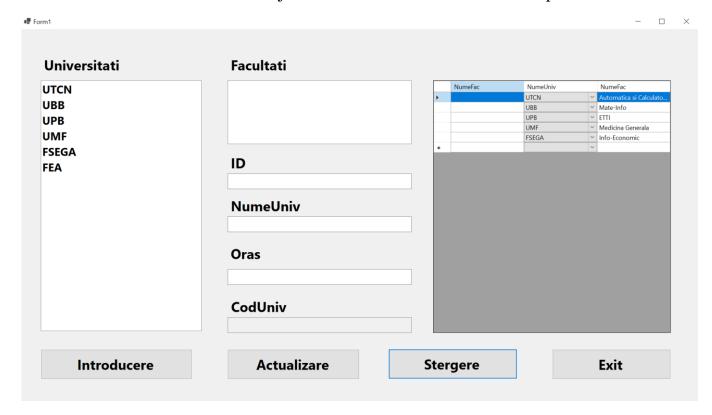
Cu ajutorul operatiei de introducere putem introduce de la tastatura noi universitati.

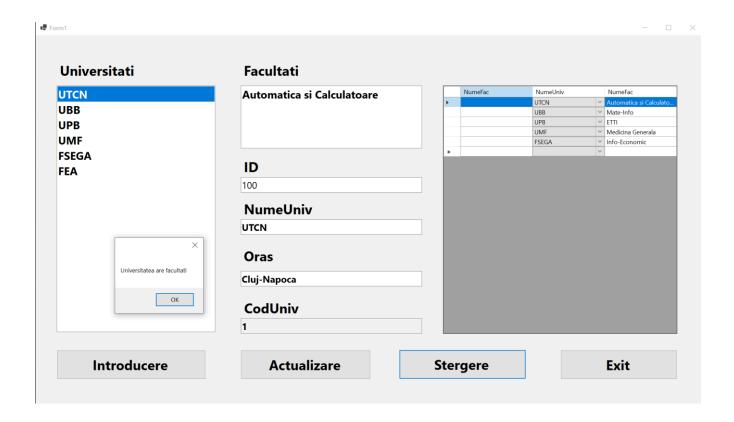




3) Operatia de stergere:

Cu ajutorul operatiei de sterge putem sterge doar universitatiile introduse de noi de la tastatura. Daca se incearca stergerea unei universitati deja existenata in baza de date vom afisa un mesaj de eroare deoarece 'Code' e cheie primara.





ii) Codul sursa aferent aplicatiei:

```
using System.Data.SqlClient;
rnamespace WinFormsApp1
        DataSet dsFac = new DataSet();
           InitializeComponent();
            myCon.ConnectionString = @"Data Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=""D:\WinFormsApp1\WinFormsApp1\Database1.mdf"";Integrated Security=True";
            myCon.Open();
           ListBox_Fill();
            PopulateComboBox();
            myCon.Close();
      dsFac.Clear();
      listBox_Univ.Items.Clear();
      daUniv.Fill(dsUniv, "Universitati");
      SqlDataAdapter daFac = new SqlDataAdapter("SELECT * FROM Facultati", myCon);
      foreach (DataRow dr in dsUniv.Tables["Universitati"].Rows)
          String name = dr.ItemArray.GetValue(1).ToString();
          listBox_Univ.Items.Add(name);
```

```
private void PopulateComboBox()
{
    SqlDataAdapter daUniv1 = new SqlDataAdapter("SELECT * FROM Universitati", myCon);
    DataTable dtUniv = new DataTable();
    daUniv1.Fill(dtUniv);
    Column2.ValueMember = "Code";
    Column2.DisplayMember = "NameUniv";
    DataRow topItem = dtUniv.NewRow();
    topItem[0] = 0;
    topItem[0] = "-Select-";
    dtUniv.Rows.InsertAt(topItem, 0);
    Column2.DataSource = dtUniv;
}

private void PopulateDataGridView()
{
    SqlDataAdapter daFac1 = new SqlDataAdapter("SELECT * FROM Facultati", myCon);
    DataTable dtFac = new DataTable();
    dafac1.Fill(dtFac);
    dataGridView1.DataSource = dtFac;
}
```

```
foreach (DataRow dr in dsFac.Tables["Facultati"].Rows)
{
    if (code == Convert.ToInt32(dr.ItemArray.GetValue(1)))
    {
        String nameFac = dr.ItemArray.GetValue(2).ToString();
        listBox_Fac.Items.Add(nameFac);
    }
}
```

```
private void button_InsertUniv_Click(object sender, EventArgs e)
{
    myCon.Open();
    try
    {
        SqlCommand command = new SqlCommand("INSERT INTO Universitati (Id, NameUniv, City) VALUES (@Id, @Name, @City)", myCon);
        command.Parameters.Add("@Cid", SqlDbType.Int).Value = int.Parse(textBox_IdUniv.Text);
        command.Parameters.Add("@Cid", SqlDbType.Text).Value = textBox_NameUniv.Text;
        command.Parameters.Add("@City", SqlDbType.Text).Value = textBox_City.Text;
        command.ExecuteNonQuery();

        ListBox_Fill();
        textBox_IdUniv.Clear();
        textBox_IdUniv.Clear();
        textBox_CodUniv.Clear();
        textBox_CodUniv.Clear();
    }
    catch (Exception ex)
    {
        MessageBox.Show(ex.ToString());
    }
    myCon.Close();
}
```

```
private void button_UpdateUniv_Click(object sender, EventArgs e)
{
    myCon.Open();
    try
    {
        SqlCommand command = new SqlCommand("UPDATE Universitati SET NameUniv = @Name, City = @City, Id=@Id WHERE Code=@Code", myCon);
        command.Parameters.Add("@Name", SqlDbType.Text).Value = textBox_NameUniv.Text;
        command.Parameters.Add("@City", SqlDbType.Int).Value = int.Parse(textBox_IdUniv.Text);
        command.Parameters.Add("@Code", SqlDbType.Int).Value = int.Parse(textBox_CodUniv.Text);
        command.Parameters.Add("@Code", SqlDbType.Int).Value = int.Parse(textBox_CodUniv.
```

```
private void button_DeleteUniv_Click(object sender, EventArgs e)
   myCon.Open();
       SqlCommand command1 = new SqlCommand("SELECT COUNT(*) FROM Facultati WHERE Code = @Code", myCon);
       command1.Parameters.Add("@Code", SqlDbType.Int).Value = Convert.ToInt32(textBox_CodUniv.Text);
       int n = Convert.ToInt32(command1.ExecuteScalar());
       if (n == 0)
           SqlCommand command = new SqlCommand("DELETE FROM Universitati WHERE Code=@Code", myCon);
           command.Parameters.Add("@Code", SqlDbType.Int).Value = Convert.ToInt32(textBox_CodUniv.Text);
           command.ExecuteNonQuery();
           ListBox_Fill();
           textBox_IdUniv.Clear();
           textBox_NameUniv.Clear();
           textBox_City.Clear();
           textBox_CodUniv.Clear();
           MessageBox.Show("Universitatea are facultati");
   MessageBox.Show(ex.ToString());
myCon.Close();
private void dataGridView1_CellValueChanged(object sender, DataGridViewCellEventArgs e)
    if (dataGridView1.CurrentRow != null)
        myCon.Open();
        DataGridViewRow row = dataGridView1.CurrentRow;
        if (row.Cells["Column1"].Value == DBNull.Value)
            SqlCommand sqlcom1 = new SglCommand("InsertFac", myCon);
            sqlcom1.CommandType = CommandType.StoredProcedure;
            sqlcom1.Parameters.AddWithValue("@Code", Convert.ToInt32(row.Cells["Column2"].Value == DBNull.Value ?
                "1" : row.Cells["Column2"].Value.ToString()));
            {\tt sqlcom1.Parameters.AddWithValue("@NameFac", row.Cells["Column3"].Value == DBNull.Value ?}
                 "" : row.Cells["Column3"].Value.ToString());
            sqlcom1.ExecuteNonQuery();
            PopulateDataGridView();
```

```
else
{
    SqlCommand sqlcom2 = new SqlCommand("UpdateFac", myCon);
    sqlcom2.CommandType = CommandType.StoredProcedure;
    sqlcom2.CommandType = CommandType.StoredProcedure;
    sqlcom2.Parameters.AddWithValue("@Id", Convert.ToInt32(row.Cells["Column1"].Value == DBNull.Value ?
        "0" : row.Cells["Column1"].Value.ToString()));
    sqlcom2.Parameters.AddWithValue("@Code", Convert.ToInt32(row.Cells["Column2"].Value == DBNull.Value ?
        "0" : row.Cells["Column2"].Value.ToString());
    sqlcom2.Parameters.AddWithValue("@NameFac", row.Cells["Column3"].Value == DBNull.Value ?
        "" : row.Cells["Column3"].Value.ToString());
    sqlcom2.ExecuteNonQuery();
}
myCon.Close();
}
```

iii) Tabelele bazei de date:

