



THE LECTURE 12

CRUD OPERATIONS IN WINDOWS FORMS

WORKING WITH TEXT FILES

- 1. Reading text files
 - a. using System.IO;
 - b. `FileStream file = new FileStream ("file.txt", FileMode.Open, FileAccess.Read);`
- 2. Writing text files
 - a. `FileStream file = new FileStream ("file.txt", FileMode.Create, FileAccess.Write);`
 - b. `StreamWriter sw = new StreamWriter (file);`
 - c. `sw.Write ("Hello");`
 - d. `sw.Close();`

DATA APPLICATION

The screenshot shows a Windows application window titled "Form1". The window contains a data management interface. On the left, there is a table with three columns: "Code", "Name", and "Note". The table has 10 rows, with the first row containing headers and the remaining 9 rows being empty. To the right of the table, there are three input fields, each with a label to its left: "Code", "Name", and "Note". Below the table and input fields, there are five buttons: "Populate", "Add", "Delete", "Save", and "Restore".

Code	Name	Note

Code

Name

Note

Populate Add Delete Save Restore

ADDING STUDENT CLASS

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Files_Application
{
    ссылка: 1
    class Student
    {
        private int code;
        private string name;
        private float note;

        Ссылка: 0
        public Student(int c, string n, float nt)
        {
            code = c;
            name = n;
            note = nt;
        }

        Ссылка: 0
        public int Code
        {
            get { return code; }
            set { code = value; }
        }

        Ссылка: 0
        public string Name
        {
            get { return name; }
            set { name = value; }
        }

        Ссылка: 0
        public float Note
        {
            get { return note; }
            set { note = value; }
        }
    }
}
```

ADDING ACTIONS OF BUTTONS

ссылка: 1

```
private void button1_Click(object sender, EventArgs e)
{
    Student[] vs = new Student[4];
    vs[0] = new Student(111, "Andrew Jackson", 10);
    vs[1] = new Student(130, "Ordy Knight", 12);
    vs[2] = new Student(140, "Shawn Ryne", 15);
    vs[3] = new Student(150, "Alyson Floyd", 16);
    foreach(Student s in vs)
    {
        ListViewItem item = new ListViewItem(s.Code.ToString());
        item.SubItems.Add(s.Name);
        item.SubItems.Add(s.Note.ToString());
        listView1.Items.Add(item);
    }
}
```

ссылка: 1

```
private void button2_Click(object sender, EventArgs e)
{
    try
    {
        Student s = new Student(Convert.ToInt32(tbCode.Text), tbName.Text, (float)Convert.ToDouble(tbNote.Text));
        ListViewItem item = new ListViewItem(s.Code.ToString());
        item.SubItems.Add(s.Name);
        item.SubItems.Add(s.Note.ToString());
        listView1.Items.Add(item);
    }
    catch(Exception ex)
    {
        MessageBox.Show("Error Input Data!", ex.Message);
    }
    finally
    {
        tbCode.Clear();
        tbName.Clear();
        tbNote.Clear();
    }
}
```

ADDING ACTIONS OF BUTTONS

ссылка: 1

```
private void button3_Click(object sender, EventArgs e)
{
    foreach(ListViewItem item in listView1.Items)
    {
        if (item.Checked == true)
            item.Remove();
    }
}
```

ссылка: 1

```
private void button4_Click(object sender, EventArgs e)
{
    FileStream fs = new FileStream("student.txt", FileMode.Append, FileAccess.Write);
    BinaryFormatter bf = new BinaryFormatter();
    ArrayList aList = new ArrayList();
    foreach (ListViewItem item in listView1.Items)
        aList.Add(item);
    bf.Serialize(fs, aList);
    fs.Close();
    listView1.Items.Clear();
}
```

ссылка: 1

```
private void button5_Click(object sender, EventArgs e)
{
    FileStream fs = new FileStream("student.txt", FileMode.Open, FileAccess.Read);
    BinaryFormatter bf = new BinaryFormatter();
    ArrayList aList = (ArrayList)bf.Deserialize(fs);
    for (int i = 0; i < aList.Count; i++)
        listView1.Items.Add((ListViewItem)aList[i]);
    fs.Close();
}
```

LISTVIEW METHODS

ссылка: 1

```
private void listView1_ItemChecked(object sender, ItemCheckedEventArgs e)
{
    if (e.Item.Checked)
        e.Item.BackColor = Color.Gray;
}
```

ссылка: 1

```
private void listView1_ItemActivate(object sender, EventArgs e)
{
    foreach (ListViewItem item in listView1.Items)
        if (item.Selected == true)
            item.ForeColor = Color.OrangeRed;
}
```

THE FORM'S VIEW

The screenshot shows a Windows application window titled "Form1". The window contains a data table with three columns: "Code", "Name", and "Note". The table has 11 rows, with the first row containing headers and the remaining 10 rows being empty. To the right of the table are three input fields, each with a label: "Code", "Name", and "Note". Below the table and input fields are five buttons: "Populate", "Add", "Delete", "Save", and "Restore".

Code	Name	Note

Code

Name

Note

THE FORM'S VIEW

The screenshot shows a Windows application window titled "Form1". Inside the window, there is a table with three columns: "Code", "Name", and "Note". The table contains four rows of data, each with a checkbox in the "Code" column. To the right of the table, there are three input fields labeled "Code", "Name", and "Note". At the bottom of the form, there are five buttons: "Populate", "Add", "Delete", "Save", and "Restore". The "Restore" button is highlighted with a blue border.

Code	Name	Note
<input type="checkbox"/> 111	Andrew Jackson	10
<input type="checkbox"/> 140	Shawn Ryne	15
<input type="checkbox"/> 150	Alyson Floyd	16
<input type="checkbox"/> 160	Landy Oils	75

Code

Name

Note