

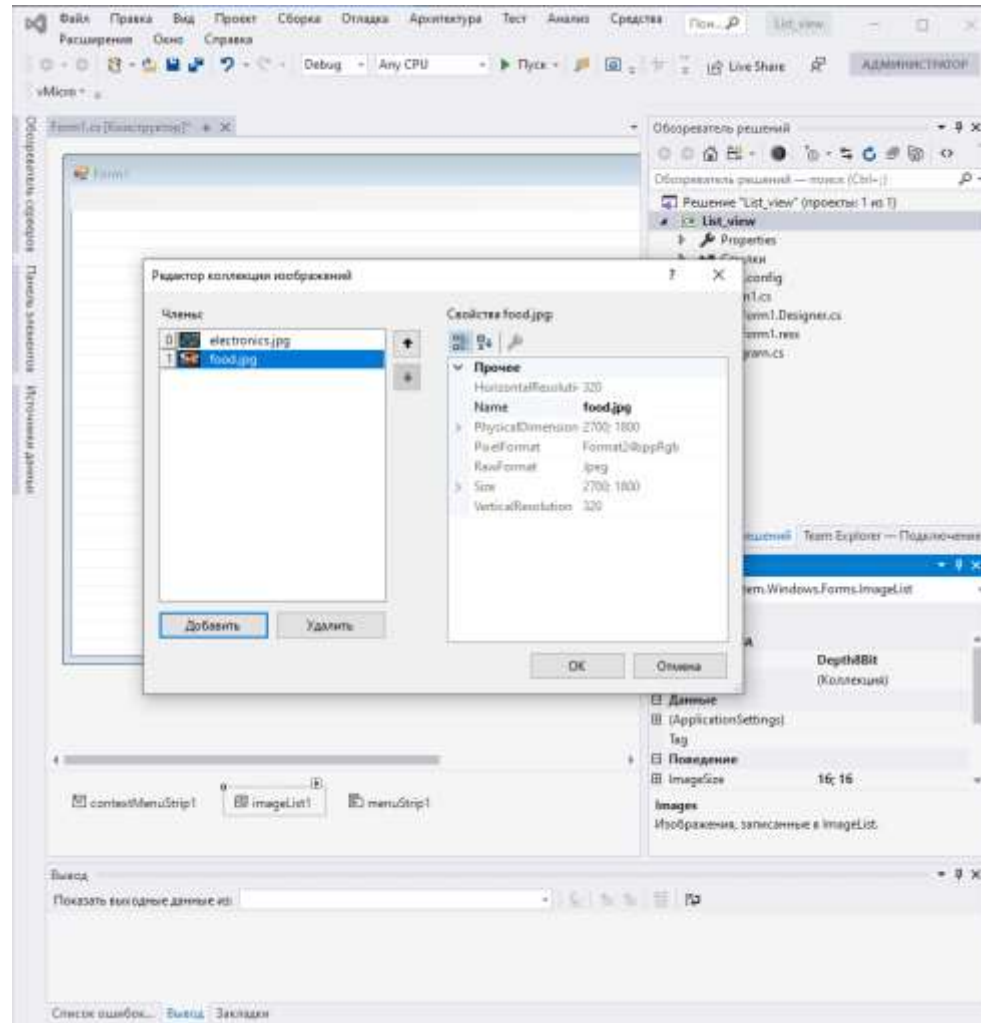


THE LECTURE 14

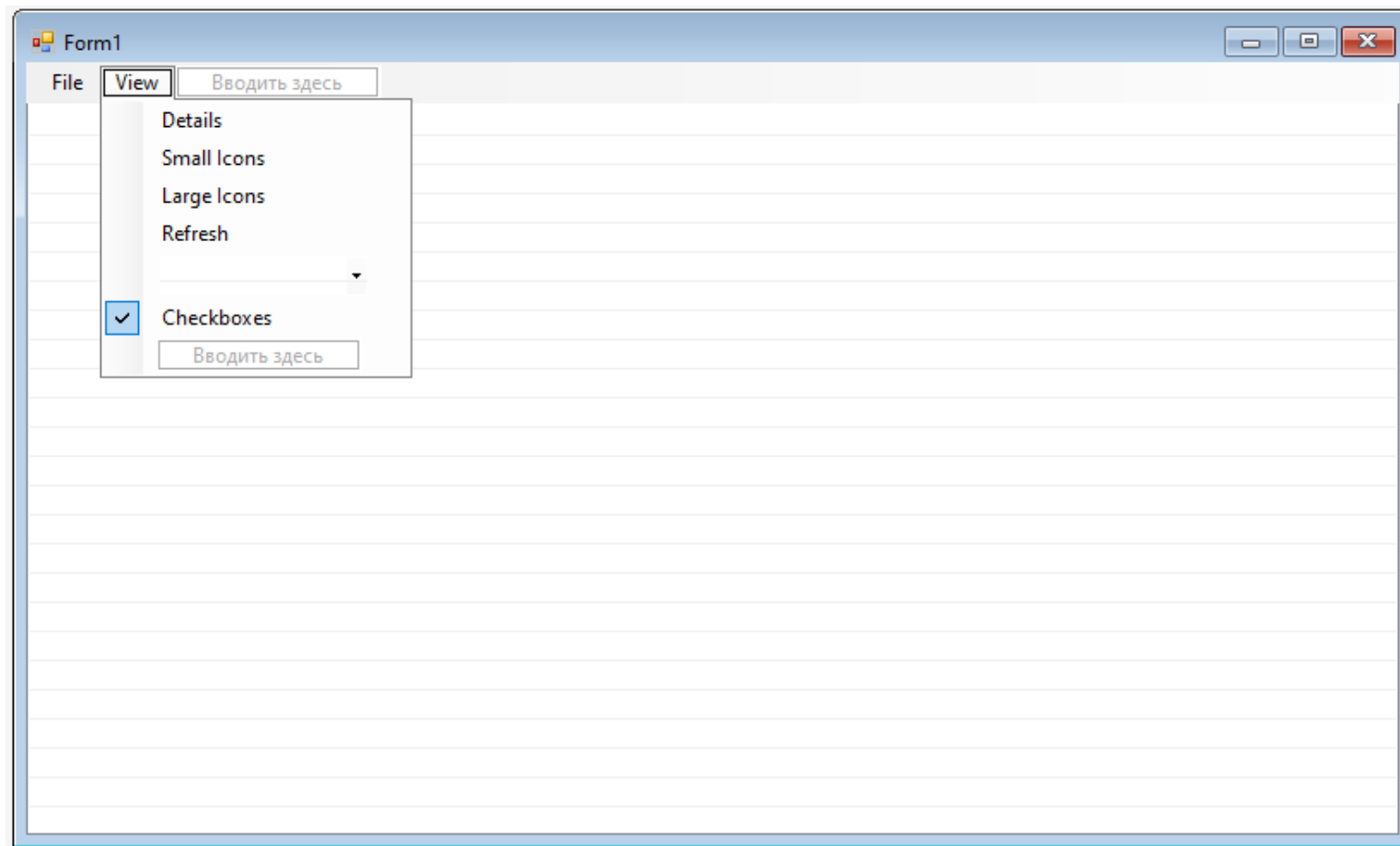


LIST VIEWS

ADDING LIST VIEW



CREATING MENU



CREATING CLASS PRODUCT

Product.cs x Form1.cs [Конструктор]

C# List_view List_view.Product

```
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace List_view
8 {
9     ссылка: 1
10    class Product
11    {
12        public string name;
13        public uint category;
14        public double price;
15        public double id;
16
17        ссылка: 0
18        public Product(string Name, uint Category, double Price, double Id)
19        {
20            name = Name;
21            category = Category;
22            price = Price;
23            id = Id;
24        }
25    }
```

CREATING SORT COLLECTION CLASS

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6 using System.Windows.Forms;
7
8 namespace List_view
9 {
10     COMPILE: 5
11     class SortWrapper
12     {
13         internal ListViewItem sortItem;
14         internal int sortColumn;
15         COMPILE: 0
16         public SortWrapper(ListViewItem Item, int iColumn)
17         {
18             sortItem = Item;
19             sortColumn = iColumn;
20         }
21         COMPILE: 0
22         public string Text
23         {
24             get { return sortItem.SubItems[sortColumn].Text; }
25         }
26         COMPILE: 1
27         public class SortComparer : System.Collections.IComparer
28         {
29             bool ascending;
30             COMPILE: 0
31             public SortComparer(bool asc)
32             {
33                 this.ascending = asc;
34             }
35             COMPILE: 0
36             public int Compare(object x, object y)
37             {
38                 SortWrapper xItem = (SortWrapper)x;
39                 SortWrapper yItem = (SortWrapper)y;
40
41                 string xText = xItem.sortItem.SubItems[xItem.sortColumn].Text;
42                 string yText = yItem.sortItem.SubItems[yItem.sortColumn].Text;
43
44                 return xText.CompareTo(yText) * (this.ascending? 1: -1);
45             }
46         }
47     }
48 }
```

CREATING COLLHEADER CLASS

```
CollHeader.cs  SortWrapper.cs  Form1.cs [Конструктор]*  Form1.resx*  Product.cs
C# List_view
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Text;
5  using System.Threading.Tasks;
6
7  namespace List_view
8  {
9      ссылка: 1
10     class CollHeader: System.Windows.Forms.ColumnHeader
11     {
12         public bool ascending;
13         Ссылка: 0
14         public CollHeader(string text, int width, System.Windows.Forms.HorizontalAlignment align, bool asc)
15         {
16             this.Text = text;
17             this.Width = width;
18             this.TextAlign = align;
19             this.ascending = asc;
20         }
21     }
22 }
```

ADDING FORM ELEMENTS

```
CollHeader.cs  SortWrapper.cs  Form1.cs  Form1.cs [Конструктор]  Form1.resx
List_view
7  using System.Text;
8  using System.Threading.Tasks;
9  using System.Windows.Forms;
10 using System.Collections;
11
12 namespace List_view
13 {
14     public partial class Form1 : Form
15     {
16         ArrayList listOfProducts;
17         public Form1()
18         {
19             InitializeComponent();
20             listOfProducts = new ArrayList();
21         }
22
23         private void InitializeTheList()
24         {
25             listOfProducts.Add(new Product("Radio Device", 0, 120, 1));
26             listOfProducts.Add(new Product("Mobile Phone", 0, 320, 2));
27             listOfProducts.Add(new Product("Biscuits", 1, 1000, 3));
28             listOfProducts.Add(new Product("Sandwiches", 1, 140, 4));
29             listOfProducts.Add(new Product("Drinks", 1, 200, 5));
30         }
31
32         private void GenerateListView(ListView listV)
33         {
34             listV.Columns.Clear();
35             listV.Columns.Add(new CollHeader("Product", 210, HorizontalAlignment.Center, true));
36             listV.Columns.Add(new CollHeader("Price", 120, HorizontalAlignment.Center, true));
37             listV.Columns.Add(new CollHeader("Type", 145, HorizontalAlignment.Center, true));
38         }
39
40         private void InitializeListView()
41         {
42             listView1.Items.Clear();
43             foreach(Product product in listOfProducts)
44             {
45                 ListViewItem item = new ListViewItem(product.name, (int)product.category);
46                 item.SubItems.Add(product.price.ToString());
47                 item.SubItems.Add(product.category.ToString());
48                 item.SubItems.Add(product.id.ToString());
49                 listView1.Items.Add(item);
50             }
51         }
52     }
53 }
```

ADDING ACTIONS TO THE MENU BUTTONS

```
ссылка: 2
private void InitializeListView()
{
    listView1.Items.Clear();
    foreach(Product product in listOfProducts)
    {
        ListViewItem item = new ListViewItem(product.name, (int)product.category)
        item.SubItems.Add(product.price.ToString());
        item.SubItems.Add(product.category.ToString());
        item.SubItems.Add(product.id.ToString());
        listView1.Items.Add(item);
    }
}
```

```
ссылка: 1
private void InitializeComboBoxSelection()
{
    string[] Options = { "Choose Selection", "Electronics", "Food" };
    toolStripComboBox1.Items.AddRange(Options);
    toolStripComboBox1.SelectedIndex = 0;
}
```

```
ссылка: 1
private void detailsToolStripMenuItem_Click(object sender, EventArgs e)
{
    listView1.View = View.Details;
}
```

```
ссылка: 1
private void smallIconsToolStripMenuItem_Click(object sender, EventArgs e)
{
    listView1.View = View.SmallIcon;
}
```

```
ссылка: 1
private void largeIconsToolStripMenuItem_Click(object sender, EventArgs e)
{
    listView1.View = View.LargeIcon;
}
```

```
ссылка: 1
private void refreshToolStripMenuItem_Click(object sender, EventArgs e)
{
    InitializeListView();
}
```

```
ссылка: 1
private void checkboxesToolStripMenuItem_Click(object sender, EventArgs e)
{
    if (checkboxesToolStripMenuItem.Checked)
        listView1.CheckBoxes = true;
    else
        listView1.CheckBoxes = false;
}
```

```
ссылка: 1
private void exitToolStripMenuItem_Click(object sender, EventArgs e)
{
    Application.Exit();
}
```

```
ссылка: 1
private void viewToolStripMenuItem_Click(object sender, EventArgs e)
{
    foreach(ListViewItem item in listView1.Items)
    {
        if (item.Selected)
            MessageBox.Show(item.Text + " - it was selected");
    }
}
```

```
ссылка: 1
private void listView1_SelectedIndexChanged(object sender, EventArgs e)
{
    foreach(ListViewItem item in listView1.Items)
    {
        if (item.Selected)
            item.ForeColor = Color.Green;
        else
            item.ForeColor = Color.Black;
    }
}
```


ADDING ACTIONS TO THE MENU BUTTONS

```
CODE: 1
private void listView1_ColumnClick(object sender, ColumnClickEventArgs e)
{
    CollHeader clickedCol = (CollHeader)this.listView1.Columns[e.Column];
    int numItems = this.listView1.Items.Count;
    this.listView1.BeginUpdate();

    ArrayList SortArray = new ArrayList();
    for(int i=0; i<numItems; i++)
    {
        SortArray.Add(new SortWrapper(this.listView1.Items[i], e.Column));
    }

    SortArray.Sort(0, SortArray.Count, new SortWrapper.SortComparer(clickedCol.ascending));

    this.listView1.Items.Clear();
    for(int i=0; i<numItems; i++)
    {
        this.listView1.Items.Add(((SortWrapper)SortArray[i]).sortItem);
    }
    this.listView1.EndUpdate();
}

CODE: 2
private void listView1_ItemActivate(object sender, EventArgs e)
{
    foreach(ListViewItem item in listView1.SelectedItems)
    {
        MessageBox.Show(item.Text + " - it was selected");
    }
}
```

```
CODE: 3
private void SelectionCategory(object sender, EventArgs e)
{
    string sCategory = "";
    int nCategory = -1;

    if(toolStripComboBox1.SelectedIndex > 0)
    {
        sCategory = toolStripComboBox1.SelectedItem.ToString();






        switch(sCategory)
        {
            case "Electronics":
                nCategory = 0;
                break;
            case "Food":
                nCategory = 1;
                break;
            default:
                break;
        }

        foreach(ListViewItem item in listView1.Items)
        {
            if (item.SubItems[2].Text.Equals(nCategory.ToString()))
                item.BackColor = Color.Gold;
            else
                item.BackColor = Color.White;
        }
    }
    else
    {
        foreach(ListViewItem item in listView1.Items)
        {
            item.BackColor = Color.White;
        }
    }
}
```

RUNNING THE APPLICATION

Form1

FileView

<input type="checkbox"/>	 Radio Device	120	0
<input type="checkbox"/>	 Mobile Phone	320	0
<input checked="" type="checkbox"/>	 Biscuits	1000	1
<input checked="" type="checkbox"/>	 Sandwiches	140	1
<input type="checkbox"/>	 Drinks	200	1