

Sort ListView Items

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Introduction

Typically items are sorted using the *Sorting* property, which sorts items based on the item text. If you want to sort the items in the ListView based on subitem text, you would use the *Sort* method.

IComparer interface

The Sort method uses the IComparer specified in the ListViewItemSorter property to perform a manual sort of the items in the ListView.

Sample Code

```
using System;
using System.Windows.Forms;
using System.Drawing;
using System.Collections;

namespace ListViewSort {

    public class ListViewSort : Form {
        private ListView listView1;

        public ListViewSort () {

            //Initialize the ListView control and add columns to it.
            this.listView1 = new ListView();

            // Set the initial sorting type for the ListView.
            this.listView1.Sorting = SortOrder.None;
            // Disable automatic sorting to enable manual sorting.
            this.listView1.View = View.Details;
            // Add columns and set their text.
            int width = this.developerView.Width/8;
            this.listView1.Columns.Add("Name", width*3,
HorizontalAlignment.Center);
            this.listView1.Columns.Add("Sex", width*3,
HorizontalAlignment.Center);
            this.listView1.Columns.Add("Age", width*2,
HorizontalAlignment.Center );

            // Set the location and size of the ListView control.
            this.listView1.Location = new Point(10, 10);
            this.listView1.Name = "listView1";
            this.listView1.Size = new Size(300, 100);
```

```
        this.listView1.TabIndex = 0;

        // Enable editing of the items in the ListView.
        this.listView1.LabelEdit = true;

        // Connect the ListView.ColumnClick event to the ColumnClick event
handler.
        this.listView1.ColumnClick += new
ColumnClickEventHandler(ColumnClick);

        //Add some sample data
        AddListViewItems("Tanaka","Male","50");
        AddListViewItems("Sienna","FeMale","22");
        AddListViewItems("Akiko","FeMale","18");

        // Call the sort method to manually sort the column based on the
ListViewItemComparer implementation.
        listView1.Sort();

        // Initialize the form.
        this.AutoScaleBaseSize = new Size(5, 13);
        this.ClientSize = new Size(400, 400);
        this.Controls.AddRange(new Control[] {this.listView1});
        this.Name = "ListViewSortForm";
        this.Text = "Sorted ListView Control";

        // Resume layout of the form.
        this.ResumeLayout(false);

    }

    //Add sample items to list view control
    private void AddListViewItems(String name,String sex,String age) {
        ListViewItem lvi = null;
        String[] columnDetails = new String[3]; //3-> Number of items to be
displayed in the List View
        columnDetails[0] = name;
        columnDetails[1] = sex;
        columnDetails[2] = age;

        lvi = new ListViewItem(columnDetails);
        this.listView1.Items.Add(lvi);
    }

    // ColumnClick event handler.
    private void ColumnClick(object o, ColumnClickEventArgs e){
        // Set the ListViewItemSorter property to a new
ListViewItemComparer object.
        this.listView1.ListViewItemSorter = new
ListViewItemComparer(e.Column);
        // Call the sort method to manually sort the column based on the
ListViewItemComparer implementation.
        listView1.Sort();
    }
}
```

```
[System.STAThreadAttribute()]
public static void Main()
{
    Application.Run(new ListViewSortForm());
}

// Implements the manual sorting of items by columns.
class ListViewItemComparer : IComparer {
    private int col;
    public ListViewItemComparer() {
        col=0;
    }
    public ListViewItemComparer(int column) {
        col=column;
    }
    public int Compare(object x, object y) {
        return String.Compare(((ListViewItem)x).SubItems[col].Text,
        ((ListViewItem)y).SubItems[col].Text);
    }
}
```

Summary

You can implement your own *IComparer* class and can override the *Compare* method based on your requirements.

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