

R流・10分で分かる Visual Studio 2008 C#の新機能

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<http://blogs.wankuma.com/rti/>

この1枚の紙に C#3.0 の新機能がつまっています!

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Windows.Forms;
namespace WindowsFormsApplication1 {
    public partial class Form1 : Form {
        public object Value { get; private set; }
        public Form1() {
            InitializeComponent();
            var c = new() {
                new { Code = 34, Name = "R・田中一郎", Age = 18 },
                new { Code = 51, Name = "ほび王子", Age = 18 },
                new { Code = 111, Name = "IJIMAS", Age = 20 }
            };
            var q1 = from x in c where x.Age == 18 select new { Code = x.Code, Name = x.Name };
            var q2 = c.Where(x => x.Age == 18).Select(x => new { Code = x.Code, Name = x.Name });
            var q3 = c.条件式(x => x.Age == 18).選択(x => new { Code = x.Code, Name = x.Name });
            combo.Binding(q3.ToArray(), "Code", "Name");
            combo.SelectedValueChanged += (sender, e) => Value = this.combo.SelectedValue;
        }
    }
    public static class Extensions {
        public static void Binding(this ComboBox x, object dataSource, string valueMember, string displayMember) {
            x.DataSource = dataSource;
            x.ValueMember = valueMember;
            x.DisplayMember = displayMember;
        }
        public static IEnumerable<T> 条件式<T>(this IEnumerable<T> value, Func<T, bool> func) {
            var r = new List<T>();
            foreach(var x in value) if (func(x)) r.Add(x);
            return r;
        }
        public static IEnumerable<TR> 選択<TS, TR>(this IEnumerable<TS> value, Func<TS, TR> func) { return value.Select(x => func(x)); }
    }
}
```

自動プロパティ
Automatic Properties

コレクション初期化子(Collection initializers)

匿名型(Anonymous types)

LINQ(Language Integrated Query)

オブジェクト初期化子
Object initializers

ラムダ式 Lambda expressions

拡張メソッド(Extension methods)

暗黙的型付(Implicitly typed local variables)