Re: Problems with Math.Round

Source:
http://www.tech−archive.net/Archive/DotNet/microsoft.public.dotnet.general/2007−10/msg00342.html

- *From*: "Benny Skjold Tordrup" <bst@xxxxxxxx>
- *Date*: Thu, 18 Oct 2007 09:56:03 +0200

Please note, this is new to .NET 2.0.

In .NET 1.1, you need to role your own Round method like in this class:

```
public sealed class Math {

/// <summary>
/// Rounds the double value to round to a specified number of decimals.
Does not use Bankers Rounding.
/// </summary>
/// <param name="value">The value to round</param>
/// <param name="digits">The number of digits to round to</param>
/// <returns>The rounded value</returns>
public static double Round(double value, int digits) {
return System.Math.Round(value +
(System.Math.Sign(value)/System.Math.Pow(10, digits+1)), digits);
}

/// <summary>
/// Rounds the double value to round to 0 decimals. Does not use Bankers
Rounding.
/// </summary>
/// <param name="value">The value to round</param>
/// <returns>The rounded value</returns>
public static double Round(double value) {
return Round(value, 0);
}

/// <summary>
/// Rounds the decimal value to round to a specified number of decimals.
Does not use Bankers Rounding.
/// </summary>
/// <param name="value">The value to round</param>
/// <param name="digits">The number of digits to round to</param>
/// <returns>The rounded value</returns>
public static decimal Round(decimal value, int digits) {
return System.Math.Round(value + Convert.ToDecimal(
System.Math.Sign(value)/System.Math.Pow(10, digits+1)), digits);
```

```
}

/// <summary>
/// Rounds the decimal value to round to 0 decimals. Does not use Bankers
Rounding.
/// </summary>
/// <param name="value">The value to round</param>
/// <returns>The rounded value</returns>
public static decimal Round(decimal value) {
return Round(value, 0);
}

}
```

"William Stacey [C# MVP]" <william.stacey@xxxxxxxxx> skrev i en meddelelse
news:%23WWWCLGEIHA.2268@xxxxxxxxxxxxxxxxxxxxxx

> This is well treated in the docs. The default is "ToEven" rounding (AKA
> Bankers rounding). This tries to prevent rounding errors by always
> rounding
> in one direction. If the digit is mid−point, and the prior digit is an
> even
> number, it rounds to even. If the number is odd, then rounds other way.
> The
> kind of rounding you may have learned in school is always round up to next
> digit − or away from zero.
>
> ```
> decimal d1 = (decimal)12.985;
> decimal d2 = Math.Round(d1, 2, MidpointRounding.ToEven);
>
> decimal d3 = Math.Round(d1, 2, MidpointRounding.AwayFromZero);
>
> decimal d4 = Math.Round((decimal)12.975, 2, MidpointRounding.ToEven);
>
> Console.WriteLine("Value:{0} ToEven:{1} AwayFromZero:{2}
> d4:{3}",d1,d2,d3,d4);
> // Value:12.985 ToEven:12.98 AwayFromZero:12.99 d4−ToEven:12.98
> ```
>
> −−
> William Stacey [C# MVP]
> PowerLocker, PowerPad
> www.powerlocker.com
>
> "Rene" <Rene@xxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message
> news:45352A19−2E38−4A84−8524−992B0220BA90@xxxxxxxxxxxxxxx
> | Hello everyone

| I have a problem with Math.Round, it´s ocurring some strange:
|
| Math.Round(12.985) = 12.98, it´s wrong. It should be: 12.99
|
| Why?? What is the problem?
|
| Help ME !!!!
|
| Renato

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