

Re: override GetHashCode

Source:

<http://www.tech-archive.net/Archive/DotNet/microsoft.public.dotnet.languages.csharp/2005-03/2455.html>

From: Bart De Boeck (*bart*)

Date: 03/09/05

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as far as I know, one of the reasons that you should override Equals is that might require that different objects (different references of the same type) can be equal
so, based on your example :

```
public class SomeType
{
    public override int GetHashCode()
    { return 1;}

    int _field = 3;
}
```

if two instances of SomeType are equal (cause _field equals), you should override Equals

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<http://www.xenopz.com>

"Stoyan" <Stoyan@discussions.microsoft.com> wrote in message news:5B42AECF-66EF-4EED-A6AA-FC30B280AE7F@microsoft.com...

```
> Hi Bart,
> I understand very well, if I override Equals, I must override and
> GetHashCode() method.
> but I don't understand for example:
> I have two classes:
> public class SomeType
> {
>     public override int GetHashCode()
>     { return 1;}
> }
> public class AnotherType
> {
>     public override int GetHashCode()
>     { return 1;}
> }
>
> SomeType a = new SomeType();
> AnotherType b = new AnotherType();
> Hashtable tbl = new Hashtable();
> tbl.Add(a,a);
> tbl.Add(b,b);
>
```

microsoft.public.dotnet.languages.csharp: Re: override GetHashCode

```
>
> object a = tbl[a]; // this object is correct (SomeType)
> object b = tbl[b]; // this object is correct (AnotherType)
>
> In my case, why must also override Equals()?
> I know, if hashcodes are different, Hashtable working better(faster)
>
> Regards,
> Stoyan
>
> "Bart De Boeck" wrote:
>
>> Hi Stoyan,
>>
>> The Hashtable type requires that if two objects are equal, they must
>> have
>> the same hash code value : when a key/value pair is added to a Hashtable,
>> the Hashtable uses the hash code of the key to determine the bucket that
>> stores the key. The bucket is then searched for a key which Equals the
>> given key (there might be more than one key in the bucket). If you wonder
>> why Equals is needed to find the key in the bucket : hashes can collide
>> (i.e. two different objects might generate the same hash - a hash
>> collision).
>> http://samples.gotdotnet.com/quickstart/howto/doc/hashtable.aspx
>>
>> Regards,
>> Bart
>>
>> --
>> http://www.xenopz.com
>> "Stoyan" <Stoyan@discussions.microsoft.com> wrote in message
>> news:FF1EE5CC-0E92-4A30-81C9-B8430C929795@microsoft.com...
>> > Hi All,
>> > I don't understand very well this part of MSDN:
>> > "Derived classes that override GetHashCode must also override Equals to
>> > guarantee that two objects considered equal have the same hash code;
>> > otherwise, Hashtable might not work correctly."
>> > Does any one know, why we must also override Equals,
>> > Please give my an example:)
>> >
>> > Thanks,
>> > Stoyan
>>
>>
>>
```