

Documentation - Restriction operators

Examples of the LINQ *Where*, *Any* and *All* operators are shown below. In the examples below *_em1* is an *EntityManager*.

C#

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[Description("This sample uses WHERE to find all customers whose  
contact title is Sales Representative.")]  
public void LinqToEntities01() {  
    var query = from cust in _em1.Customers  
                where cust.ContactTitle == "Sales Representative"  
                orderby cust.CompanyName  
                select cust;  
    var r = query.ToList();  
    Assert.IsTrue(r.First().CompanyName == "Alfreds Futterkiste");  
}  
[Description("This sample uses WHERE to find all orders placed  
before 1997.")]  
public void LinqToEntities02() {  
    var metadata =  
EntityMetadataStore.Instance.GetEntityMetadata(typeof(InternationalOrder));  
    DateTime dt = new DateTime(1997, 1, 1);  
    var query = from order in _em1.Orders  
                where order.OrderDate < dt  
                orderby order.OrderDate  
                select order;  
    Assert.IsTrue(query.First().Freight == 32.38M);  
}  
[Description("This sample uses WHERE to filter for Products that  
have stock below their reorder level and have a units on)]  
public void LinqToEntities03() {  
    var query = from p in _em1.Products  
                where p.UnitsInStock < p.ReorderLevel &&  
p.UnitsOnOrder == 0  
                orderby p.UnitsInStock  
                select p;  
    Assert.IsTrue(query.First().ProductName == "Nord-Ost  
Matjeshering");  
}  
[Description("This sample uses WHERE to filter out Products that  
have a UnitPrice less than 10.")]  
public void LinqToEntities04() {  
    var query = from p in _em1.Products  
                where p.UnitPrice < 10  
                orderby p.ProductName  
                select p;  
    Assert.IsTrue(query.First().ProductName == "Filo Mix");  
}  
[Description("This sample uses WHERE to find Employees in  
London.")]  
public void LinqToEntities04a() {  
    var query = from e in _em1.Employees  
                where e.Address.City == "London"  
                orderby e.EmployeeID  
                select e;  
    Assert.IsTrue(query.First().LastName == "Buchanan");  
}  
[Description("This sample uses WHERE to get previous  
employees.")]  
public void LinqToEntities05() {  
    var query = from e in _em1.Employees  
                where e is PreviousEmployee  
                orderby e.EmployeeID  
                select e;  
    var r = query.ToList();  
    Assert.IsTrue(r.First().LastName == "King");  
}  
[Description("This sample uses WHERE to get employees who  
handle the Boston territory.")]  
public void LinqToEntities06() {  
    var query = from e in  
_em1.Employees.OfType<CurrentEmployee>()  
                where e.Territories.Any(t => t.TerritoryDescription ==  
"Boston")  
                orderby e.EmployeeID
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	<pre> select e; Assert.IsTrue(query.First().LastName == "Fuller"); } [Description("This sample uses any Customers who placed an order in 1997.")] public void LinqToEntities07() { var query = from c in _em1.Customers where c.Orders.Any(o => o.OrderDate.HasValue == true && o.OrderDate.Value.Year == 1997) select c; Assert.IsTrue(query.Count() == 85); } [Description("This sample uses ANY to check for any out-of-stock products.")] public void LinqToEntities08() { var query = _em1 .Suppliers .Where(s => s.Products .Any(p => p.UnitsInStock == 0)) .Select(s => s); Assert.IsTrue(query.Count() == 5); } [Description("This sample uses WHERE and ANY to get orders containing a product with a unit on order.")] public void LinqToEntities09() { var query = from o in _em1.Orders where o.OrderDetails.Any(od => od.Product.UnitsOnOrder > 0) select o; Assert.IsTrue(query.ToList().Count == 366); Assert.IsTrue(query.Count() == 366); } [Description("This sample uses COUNT to get Products sold to Customers in the same Country " + "as the Products' Suppliers, and where all the Products in the order were from the same Country.")] public void LinqToEntities10() { var query = from p in _em1.Products where p.OrderDetails.Count(od => od.Order.Customer.Address.Country == p.Supplier.Address.Country) > 2 select p; Assert.IsTrue(query.Count() == 20); } </pre>
VB	<pre> <Description("This sample uses WHERE to find all customers whose contact title is Sales Representative.")> Public Sub LinqToEntities01() Dim query = From cust In _em1.Customers Where cust.ContactTitle = "Sales Representative" Order By cust.CompanyName Select cust Dim r = query.ToList() Assert.IsTrue(r.First().CompanyName = "Alfreds Futterkiste") End Sub <Description("This sample uses WHERE to find all orders placed before 1997.")> Public Sub LinqToEntities02() Dim metadata = EntityMetadataStore.Instance.GetEntityMetadata(GetType(InternationalOrder)) Dim dt As New Date(1997, 1, 1) Dim query = From order In _em1.Orders Where order.OrderDate < dt Order By order.OrderDate Select order Assert.IsTrue(query.First().Freight = 32.38D) End Sub <Description("This sample uses WHERE to filter for Products that have stock below their reorder level and have a units on> Public Sub LinqToEntities03() Dim query = From p In _em1.Products </pre>

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        Where p.UnitsInStock < p.ReorderLevel AndAlso
p.UnitsOnOrder = 0
        Order By p.UnitsInStock
        Select p
        Assert.IsTrue(query.First().ProductName = "Nord-Ost
Matjeshering")
End Sub
<Description("This sample uses WHERE to filter out Products that
have a UnitPrice less than 10.")>
Public Sub LinqToEntities04()
    Dim query = From p In _em1.Products
        Where p.UnitPrice < 10
        Order By p.ProductName
        Select p
    Assert.IsTrue(query.First().ProductName = "Filo Mix")
End Sub
<Description("This sample uses WHERE to find Employees in
London.")>
Public Sub LinqToEntities04a()
    Dim query = From e In _em1.Employees
        Where e.Address.City = "London"
        Order By e.EmployeeID
        Select e
    Assert.IsTrue(query.First().LastName = "Buchanan")
End Sub
<Description("This sample uses WHERE to get previous
employees.")>
Public Sub LinqToEntities05()
    Dim query = From e In _em1.Employees
        Where TypeOf e Is PreviousEmployee
        Order By e.EmployeeID
        Select e
    Dim r = query.ToList()
    Assert.IsTrue(r.First().LastName = "King")
End Sub
<Description("This sample uses WHERE to get employees who
handle the Boston territory.")>
Public Sub LinqToEntities06()
    Dim query = From e In _em1.Employees.OfType(Of
CurrentEmployee)()
        Where e.Territories.Any(Function(t) t.TerritoryDescription
= "Boston")
        Order By e.EmployeeID
        Select e
    Assert.IsTrue(query.First().LastName = "Fuller")
End Sub
<Description("This sample uses any Customers who placed an order
in 1997.")>
Public Sub LinqToEntities07()
    Dim query = From c In _em1.Customers
        Where c.Orders.Any(Function(o) o.OrderDate.HasValue =
True AndAlso o.OrderDate.Value.Year = 1997)
        Select c
    Assert.IsTrue(query.Count() = 85)
End Sub
<Description("This sample uses ANY to check for any out-of-stock
products.")>
Public Sub LinqToEntities08()
    Dim query = _em1.Suppliers.Where(Function(s)
s.Products.Any(Function(p) p.UnitsInStock = 0)).Select(Function(s)
s)
    Assert.IsTrue(query.Count() = 5)
End Sub
<Description("This sample uses WHERE and ANY to get orders
containing a product with a unit on order.")>
Public Sub LinqToEntities09()
    Dim query = From o In _em1.Orders
        Where o.OrderDetails.Any(Function(od)
od.Product.UnitsOnOrder > 0)
        Select o
    Assert.IsTrue(query.ToList().Count = 366)

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Assert.IsTrue(query.Count() = 366)
End Sub
<Description("This sample uses COUNT to get Products sold to
Customers in the same Country " & " as the Products' Suppliers, and
where all the Products in the order were from the same Country.")>
Public Sub LinqToEntities10()
Dim query = From p In _em1.Products
Where p.OrderDetails.Count(Function(od)
od.Order.Customer.Address.Country = p.Supplier.Address.Country) >
2
Select p
Assert.IsTrue(query.Count() = 20)
End Sub
```