Nested controls are controls placed within the item templates or transformations used by other controls or web parts. By nesting listing controls, you can display lists of items inside other lists (in a hierarchical structure).

> ✅ **Tip**: The CMSUniView control allows you to display hierarchical data without using nested controls. The UniView controls have better performance than nested listing controls.

The following CMS controls support nested controls:

- CMSDataList
- CMSRepeater

These controls have the **NestedControlsID** property, which connects the nested controls to the parent control. The parent control then dynamically provides the correct page **Path** to the nested controls for each item in the list.

You can combine the controls as required. Other controls, such as the CMSDataGrid can be nested inside the CMSRepeater or CMSDatalist, but cannot contain nested controls themselves.

> ⚠️ **Note**: If you need to set the properties of a nested control in your code, set the control's **DelayedLoading** property to *True* in the markup.

Example - Displaying a nested datalist

This following example demonstrates how to use a *CMSRepeater/CMSDatalist* combination to display a list of product categories and a preview of products in each category (from the sample Corporate Site):

1. Create a new **Web form** in your web project.
2. Drag the **CMSRepeater** control from the toolbox onto the form.
3. Set the following properties for the control:

   - **Path**: /Products/%
   - **ClassNames**: cms.menuitem
   - **NestedControlsID**: CMSDataListNested
   - **OrderBy**: NodeOrder

4. Add the following code marked by the **CMSRepeater template** comments between the *<cms:CMSRepeater>* tags. The overall code of the CMSRepeater control should look like this:

```
<asp:ScriptManager ID="manScript" runat="server" ScriptMode="Release"
EnableViewState="false" />

<cms:CMSRepeater ID="CMSRepeater1" runat="server" Path="/Products/%" ClassNames="
CMS.MenuItem" NestedControlsID="CMSDataListNested" OrderBy="NodeOrder" >

        <%-- CMSRepeater template
---------------------------------------------------------- --%>

        <ItemTemplate>
                <h1><%# Eval("DocumentName") %></h1>

                <%-- Nested DataList
---------------------------------------------------------- --%>

                <div class="ProductList" >
                        <cms:CMSDataList ID="CMSDataListNested" runat="server"
ClassNames="cms.smartphone;cms.laptop;cms.software;cms.ebook;cms.product"
TransformationName="CorporateSite.Transformations.ProductList" RepeatColumns="6"
/>
                </div>

                <%-- Nested DataList
---------------------------------------------------------- --%>

        </ItemTemplate>

        <%-- CMSRepeater template
---------------------------------------------------------- --%>

</cms:CMSRepeater>
```

This defines the template used by the CMSRepeater to display items. The template contains a nested CMSDataList control that displays all product types in six columns using a transformation. The **ID** of the nested DataList is the same as the value of the CMSRepeater's **NestedControlsID** property. Note that the **Path** property of the nested data list is not specified, since the parent CMSRepeater control dynamically supplies the path value.

You can alternatively achieve the same result by placing the CMSDataList control into the code of an ASCX transformation (assigned through the **TransformationName** property of the CMSRepeater).

The **ScriptManager** control included on the page is required by the *CorporateSite.Transformations.ProductList* transformation used to display product pages. It is only there to ensure that the web form is functional as a standalone example. Typically, the *ScriptManager* is included on the website's master page.

5. Save the web form.
6. Right-click the web form in the Solution explorer and select **View in Browser**.

The resulting page displays a hierarchical list of product category headers and the products stored under each category.

Note: The following image is from a page that uses the default Corporate Site stylesheet to style the displayed products.

Smartphones

Apple iPhone 3GS	Apple iPhone 4	BlackBerry Torch 9800	HTC Sensation
$424.99	$759.99	$459.99	$799.99

Laptops and Tablets

Apple iPad 2	Apple MacBook Pro MC723LL/A	Dell XPS 15z	HP EliteBook 8440p WJ681AW
$510.99	$2199.00	$1596.99	$1899.00