The UniPager is a universal paging control that can ensure paging for any control that implements the *IUniPageable* interface. This includes the following Basic and Generic controls:

- BasicDataList
- BasicRepeater
- BasicUniView
- UniView

As well as the following CMS controls:

- CMSDataList
- CMSRepeater
- QueryDataList
- QueryRepeater

Note

If you place the UniPager control after the attached listing control, that control must bind its data later in the page life cycle than during the **Init** event. Otherwise the UniPager does not apply paging.

For the CMSDataList and CMSRepeater controls, you can solve this issue by setting the **DelayedLoading** property to *true* .

The QueryDataList and QueryRepeater controls do not have the DelayedLoading property, but you can ensure that paging is applied correctly by setting their **DataBindByDefault** property to *false* and manually calling their **Databind()** method during the **Load** event:

```
protected void Page_Load(object sender, EventArgs e)
{
        QueryRepeater1.DataBind();
}
```

The UniPager is also built into the CMSUniView and QueryUniView controls and can be enabled by their **EnablePaging** property.

Web part equivalent (portal engine): Universal pager

Getting started

The following is a step-by-step tutorial that shows how to add a page to a CMSRepeater control that displays all pages (menu items) in the system:

1. Create a new **Web form** somewhere in your web project.
2. Drag the **CMSRepeater** control from the toolbox onto the form.
3. Set the following properties for the CMSRepeater:
    - **Path**: /%
    - **ClassNames**: cms.menuitem
    - **DelayedLoading**: True
    - **OrderBy:** NodeLevel, NodeOrder (when connecting a UniPager, we strongly recommend explicitly setting the order of the displayed data items)

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

```
<cms:CMSRepeater ID="CMSRepeater1" runat="server" Path="/%" ClassNames="cms.
menuitem" DelayedLoading="true" OrderBy="NodeLevel, NodeOrder">

        <%-- CMSRepeater templates
------------------------------------------------------------ --%>

        <ItemTemplate>
                <%# HTMLHelper.HTMLEncode(Convert.ToString(Eval
("NodeAliasPath"))) %>
        </ItemTemplate>
        <AlternatingItemTemplate>
                <font color="#999999">
                        <%# HTMLHelper.HTMLEncode(Convert.ToString(Eval
("NodeAliasPath"))) %>
                </font>
        </AlternatingItemTemplate>
        <SeparatorTemplate>
                <br />
        </SeparatorTemplate>

<%-- CMSRepeater templates
------------------------------------------------------------ --%>

</cms:CMSRepeater>
```

This sets the templates used by the CMSRepeater to display the pages (menu items). The control dynamically replaces the <%# ... %> tags with values of the currently displayed record. This is repeated for every record in the data source.

5. Drag a **UniPager** control from the toolbox onto the form one line below the CMSRepeater.
6. Set the UniPager's **PageControl** property to *CMSRepeater1*.
7. Set the **GroupSize** property to 10.
8. Add the code marked by the **UniPager templates** comments between the *<cms:UniPager>* tags. The overall code of the UniPager control should look like this:

```
<cms:UniPager ID="UniPager1" runat="server" PageControl="CMSRepeater1" GroupSize="
10">

        <%-- UniPager templates
------------------------------------------------------------ --%>

                <PageNumbersTemplate>
                        <a href="<%# Eval("PageURL") %>"><%# Eval("Page") %></a>
                </PageNumbersTemplate>

        <%-- UniPager templates
------------------------------------------------------------ --%>

</cms:UniPager>
```

> This sets the minimum required template that enables the UniPager with a very simple design. Please see the Appearance and styling section to learn about the more advanced templates.

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

The control displays a pager under the list.

To make the pager fully functional, continue in the Full structure example section.

Configuration

You can set the following properties for the UniPager control:

Common pager control properties	Description
CurrentPage	The current page number.
MaxPages	Maximum number of pages that the control displays.
PageCount	The current number of pages (read only).
PageSize	The number of displayed items per page.

UniPager properties	Description	Sample value
DataSourceItemsCount	The amount of items in the data source.	
DirectPageControlID	The ID of the control used for direct page changing.	
DisplayFirstLastAutomatically	If enabled, the first and last buttons of the pager will be displayed only when there is no other way of accessing the first or last page through the pager.	
DisplayPreviousNextAutomatically	If enabled, the previous and next buttons of the pager will be displayed only when there is no other way of accessing the previous or next page through the pager.	
EnvelopeTag	The current envelope tag.	

GroupSize	The amount of page links displayed in one group.	
HidePagerForSinglePage	If true, the pager is hidden if only one page is displayed.	
HTMLEnvelopeRenderingMode	The HTML envelope rendering mode for the current page.	"Always" "Never" "OnlyForUpdatePanel"
PageControl	The ID of the control to be paged.	
PagedControl	The object of the control to be paged.	
PagerMode	Determines the type of the used paging parameter. It can either be passed through the URL (QueryString) or through postback (PostBack).	"PostBack" "QueryString"
QueryStringKey	Name of the query string parameter that contains the current page number. This is useful if there are multiple UniPager controls on the same page.	"pagenumber"
RelatedData	Custom data connected to the object.	

Appearance and styling

The appearance of the UniPager control is determined by the code of its item templates. You can define the following templates within the UniPager tags:

Template name	Description	Sample value
CurrentPageTemplate	Template used for the current page in the pager. Use the following in-line code in the template: • *<%# Eval("Page") %>* - gets the current page number. • *<%# Eval("PageURL") %>* - gets the page URL • *<%# Eval("PageLink") %>* - creates a link to the page	`<strong><%# Eval("Page") %></strong>`

DirectPageTemplate	Template used for direct page changing. Use a **TextBox** or **DropDownList** control with ID *DirectPageControl* to register the page change event.	`Page <asp:TextBox ID="DirectPageControl" runat="server" Style="width: 25px;" /> of <%# Eval("Pages") %>`
FirstPageTemplate	Template used for the link to the first page in the pager. Use *<%# Eval("FirstURL") %>* to get the link to the first page.	`<a href="<%# Eval("FirstURL") %>">|<</a>`
LastPageTemplate	Template used for the link to the last page in the pager. Use *<%# Eval("LastURL") %>* to get the URL of the last page.	`<a href="<%# Eval("LastURL") %>">>|</a>`
LayoutTemplate	Template that determines the overall design of the pager.	
NextGroupTemplate	Template used for the link to the next group of pages. Use *<%# Eval("NextGroupURL") %>* to get the URL of the next group.	`<a href="<%# Eval("NextGroupURL") %>">...</a>`

NextPageTemplate	Template used for the link to the next page. Use *<%# Eval("NextURL") %>* to get the URL of the next page.	`<a href="<%# Eval("NextURL") %>">></a>`
PageNumbersSeparatorTemplate	Template used for the separator between page links in the pager.	` `
PageNumbersTemplate	Template used for page links in the pager. Use the following in-line code in the template: • *<%# Eval("Page") %>* - gets the page number • *<%# Eval("PageURL") %>* - gets the URL of the page • *<%# Eval("PageLink") %>* - creates a link to the page	`<a href="<%# Eval("PageURL") %>"><%# Eval("Page") %></a>`
PreviousGroupTemplate	Template used for the link to the previous group of pages. Use *<%# Eval("PreviousGroupURL") %>* to get the URL of the next group.	`<a href="<%# Eval("PreviousGroupURL") %>">...</a>`
PreviousPageTemplate	Template used for the link to the previous page. Use *<%# Eval("PreviousURL") %>* to get the URL of the next page.	`<a href="<%# Eval("PreviousURL") %>"><</a>`

Full structure example

The following example shows how the UniPager control looks when all of its templates are defined.

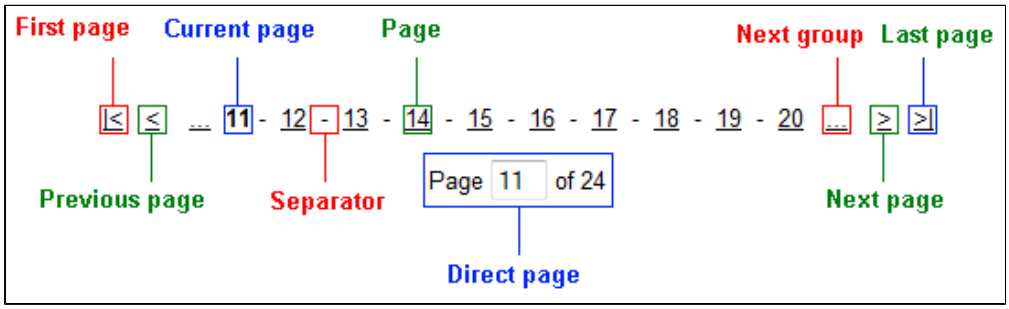
Note: If you wish to create the example for yourself, first follow the tutorial in the Getting started section up to and including step **5**.

1. Add the code marked by the **UniPager templates** comments between the <cms:UniPager> tags. The overall code of the UniPager control should look like this:

```
<cms:UniPager ID="UniPager1" runat="server" PageControl="CMSRepeater1">

        <%-- UniPager templates
------------------------------------------------------ --%>

        <PageNumbersTemplate>
                <a href="<%# Eval("PageURL") %>"><%# Eval("Page") %></a>
        </PageNumbersTemplate>
        <CurrentPageTemplate>
            <strong><%# Eval("Page") %></strong>
        </CurrentPageTemplate>
        <PageNumbersSeparatorTemplate>
             - 
        </PageNumbersSeparatorTemplate>
        <FirstPageTemplate>
            <a href="<%# Eval("FirstURL") %>">|&lt;</a>
        </FirstPageTemplate>
        <LastPageTemplate>
            <a href="<%# Eval("LastURL") %>">&gt;|</a>
        </LastPageTemplate>
        <PreviousPageTemplate>
            <a href="<%# Eval("PreviousURL") %>">&lt;</a>
        </PreviousPageTemplate>
        <NextPageTemplate>
            <a href="<%# Eval("NextURL") %>">&gt;</a>
        </NextPageTemplate>
        <PreviousGroupTemplate>
            <a href="<%# Eval("PreviousGroupURL") %>">...</a>
        </PreviousGroupTemplate>
        <NextGroupTemplate>
            <a href="<%# Eval("NextGroupURL") %>">...</a>
        </NextGroupTemplate>
        <DirectPageTemplate>
            Page
            <asp:TextBox ID="DirectPageControl" runat="server" Style="width:
25px;" />
            of
            <%# Eval("Pages") %>
        </DirectPageTemplate>
        <LayoutTemplate>
            <asp:PlaceHolder runat="server" ID="plcFirstPage"></asp:PlaceHolder>
            <asp:PlaceHolder runat="server" ID="plcPreviousPage"></asp:
PlaceHolder> 
            <asp:PlaceHolder runat="server" ID="plcPreviousGroup"></asp:
PlaceHolder>
            <asp:PlaceHolder runat="server" ID="plcPageNumbers"></asp:PlaceHolder>
            <asp:PlaceHolder runat="server" ID="plcNextGroup"></asp:
PlaceHolder> 
            <asp:PlaceHolder runat="server" ID="plcNextPage"></asp:PlaceHolder>
            <asp:PlaceHolder runat="server" ID="plcLastPage"></asp:PlaceHolder>
            <br />
            <asp:PlaceHolder runat="server" ID="plcDirectPage"></asp:
PlaceHolder>
        </LayoutTemplate>

        <%-- UniPager templates
------------------------------------------------------ --%>

</cms:UniPager>
```

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

The resulting page contains a pager like in the following diagram:



UniPager section	Description
Layout Template	Determines the overall design of the displayed pager. To place the locations of individual templates into the layout, use PlaceHolder controls with their *ID* properties set according to the names of the templates, e.g. *plcFirstPage* for the *FirstPageTemplate*. The content of individual pages is dependent on the listing control connected to the UniPager. Set the maximum number of items displayed per page through the UniPager control's **PageSize** property.
Page	Defined by the code of the **PageNumbersTemplate**. It is usually used to display the general page links of the pager. The amount of displayed page links can be set by the UniPager control's **GroupSize** property.
Current page	Defined by the code of the **CurrentPageTemplate**. It is usually used to display the number of the currently selected page.
Direct page	Defined by the code of the **DirectPageTemplate**. It is usually used to display a control that allows direct switching between pages. The ID property of the used control must be set to ***DirectPageControl*** as in the example.
Separator	Defined by the code of the **PageNumbersSeparatorTemplate**. It is placed between every page number in the pager.
First/Last page	These areas are defined by the code of the **FirstPageTemplate** and **LastPageTemplate**. They are usually used to display links to the first and last page of the pager. If the UniPager control's **DisplayFirstLastAutomatically** property is set to true, this area is only shown when there is no other way of accessing the first or last page through the pager.
Next /Previous page	These areas are defined by the code of the **NextPageTemplate** and **PreviousPageTemplate**. They are usually used to display links to the next and previous page of the pager. If the UniPager control's **DisplayPreviousNext Automatically** property is set to true, this area is only shown when there is no other way of accessing the previous or next page through the pager.
Next /Previous group	These areas are defined by the code of the **NextGroupTemplate** and **PreviousGroupTemplate**. They are usually used to display links to the next and previous group of pages.