This page demonstrates how to write transformations for a sample *Computer* page type. See Creating page types for instructions on how to create page types.

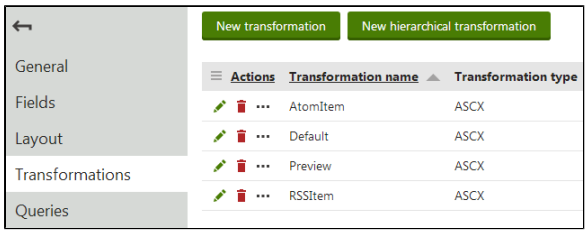
Storing transformations

Typically, transformations are stored under the page type they are meant to display. However, there are situations in which you may want to create more general transformations to share by different page types. You can create a special **Container page type** for this purpose.

Managing transformations

1. Open the **Page types** application.
2. **Edit** (✎) a page type.
3. Open the **Transformations** tab.

This is the main management interface for the transformations of a given page type.



Example - Creating a transformation for a specific page type

This example uses a specific (Computers) page type. See Creating page types if you want to create a page type that uses the same fields. You can apply the information here to other page types as well.

- Creating default page type transformation
- Preparing the source pages
- Editing transformations

Creating default page type transformation

1. Open the **Page types** application.
2. **Edit** the **Computer** page type.
   - See how you can create the page type this example works with.
3. Switch to the **Transformations** tabs.
4. Click **New transformation**.
5. Enter **Preview** as transformation name.
6. **Save**.
7. Create another transformation in the same way and name it **Default**.

Preparing the source pages

Before you can use the transformations, you first need to add some computer pages to the website.

1. Open the **Pages** application, select the root of the website and click **New** (+).
2. Select the **Page (menu item)** page type.
3. Type in *Computers* as the **Page name** and select the **Create a blank page** template option.
4. Click **Save** to create the page.
5. Switch to the **Design** tab of the new page and add a **Datalist** web part into *zoneA*.
6. Set the following property values for the **Datalist** web part:

   - **Page types**: *custom.computer*; you can choose the page type from a list by clicking the **Select** button.

- **Transformation**: *custom.computer.preview*; to easily choose from a list of available transformations, click **Select** , choose the *Computer* page type in the dialog and then click on the required transformation.
- **Selected item transformation**: *custom.computer.default*

7. Click **OK** to insert the web part.
   - The web part will display the data of computer pages on the page according to the specified transformations. For now, the page is empty because there are no pages of the *custom.computer* type on the website.

8. Click **New** (+) with the *Computers* page selected and choose the **Computer** page type.
   - The page displays an editing form with the fields of the computer page type.

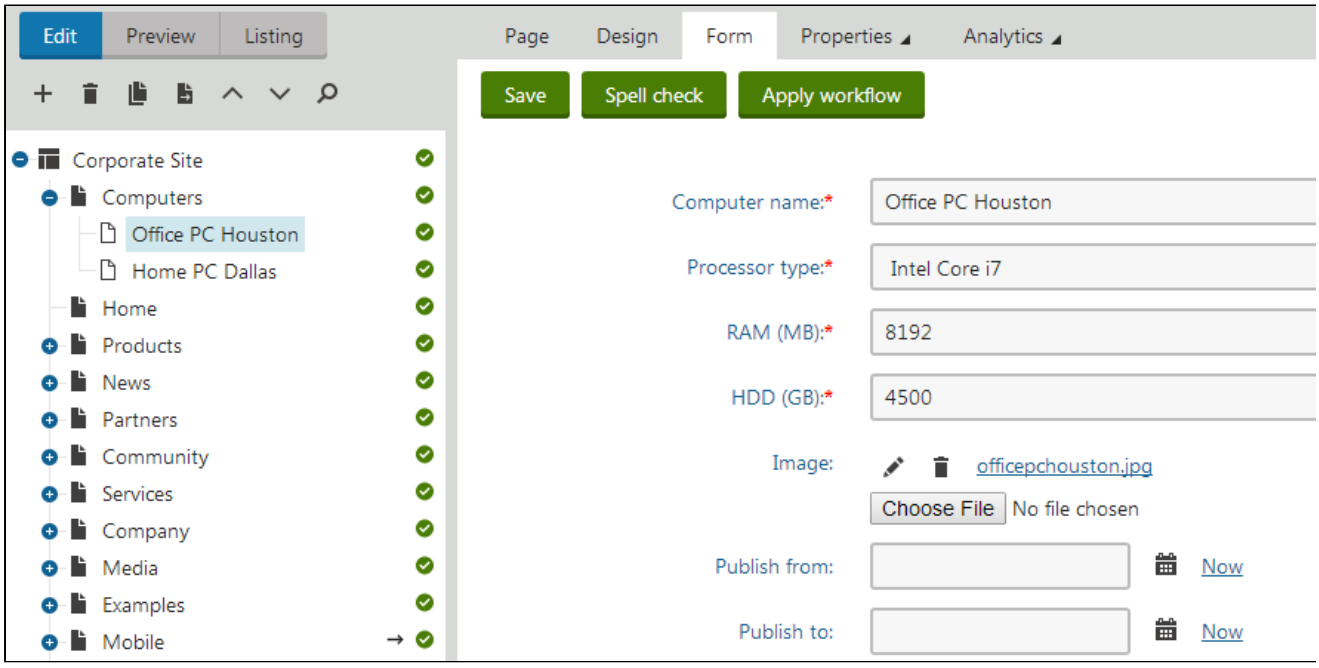
9. Enter the following values:

   - **Computer name**: Home PC Dallas
   - **Processor type**: AMD FX 8-Core
   - **RAM (MB)**: 16384
   - **HDD (GB)**: 4500
   - **Image**: Upload an image from your local disk.

10. Click **Save and create another** and enter the following values for the second computer page:

    - **Computer name**: Office PC Houston
    - **Processor type**: Intel Core i7
    - **RAM (MB)**: 8192
    - **HDD (GB)**: 4500
    - **Image**: Upload another image.

11. Click **Save**.



Editing transformations

The way the *Computers* pages display data is determined by its transformations. You can fully customize the data format by modifying the code of the transformations through the main interface in the **Page types** application. The **Pages** application also allows you to edit transformations, which is more convenient in many cases. As you will often want to make changes to transformations when you are actually displaying the data. Let's see how you can do that now:

1. In the **Pages** application, return to the **Edit** mode and open the **Design** tab of the *Computers* page.
2. **Configure** (double-click) the **Datalist** web part, scroll down to the **Transformation** property and click **Edit**.
   - The editing dialog of the ***custom.computer.Preview*** **transformation** opens. The **Datalist** web part uses this transformation for displaying data when listing computer entries.

3. Enter the following code:

```
<div style="text-align:center;padding: 8px;margin: 4px;border: 1px solid #CCCCCC">
  <h2>
    <a href="<%# GetDocumentUrl() %>"><%# Eval("ComputerName") %></a>
  </h2>
  <%# GetImage("ComputerImage", 120) %>
</div>
```

Because this is an **ASCX** type transformation, the code is similar to standard *ItemTemplates* that you may already be familiar with from using ASP.NET Repeater or *DataList* controls. It combines HTML with ASP.NET commands and data binding expressions. You may also use the built-in transformation methods that simplify various tasks.

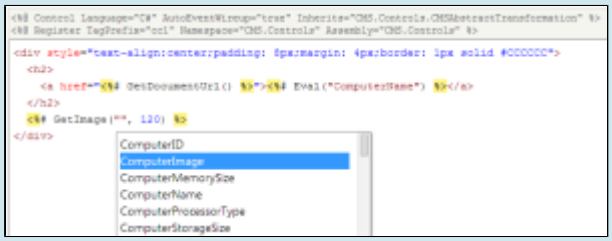
Notice the code used to create the link to specific pages. It consists of a standard HTML link tag and inserts the appropriate URL and link text dynamically:

```
<a href="<%# GetDocumentUrl() %>"><%# Eval("ComputerName") %></a>
```

You can generate an image tag containing the file uploaded into the given page's **ComputerImage** field using the **GetImage** method. The sample code calls the method with a parameter that ensures automatic serverside resizing of the image's longest side to 120 pixels:

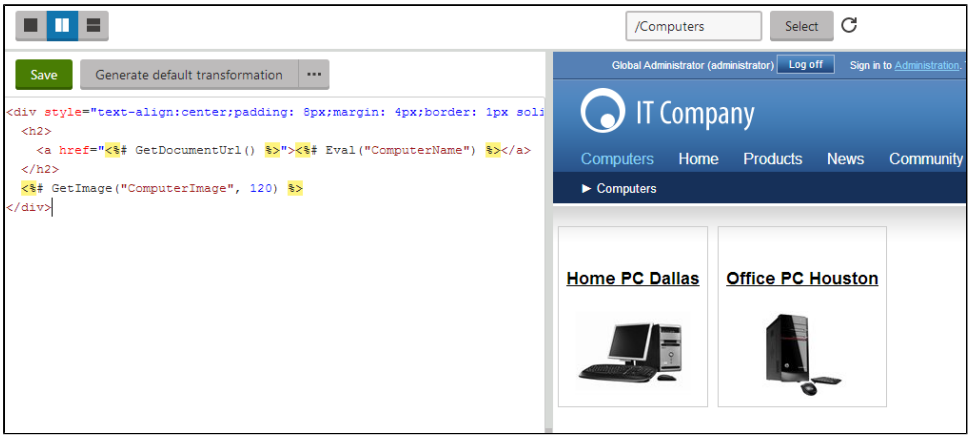
```
<%# GetImage("ComputerImage", 120) %>
```

When writing ASCX transformations, you often need to specify the names of data fields as parameters of the *Eval* data binding expression or other methods, such as *ComputerName* and *ComputerImage* in the example above. You can either type the names manually, or press the **CTRL + SPACE** key combination to access a list of available page fields and related objects.



By clicking an item in the list or by selecting it and pressing enter, you can insert the item to the current cursor position in the code. The specific fields of the given page type are prioritized at the top.

4. Click **Save** to apply the changes in the code.
5. Click **Preview** to see how the transformation affects the page.
   - This opens a split view that allows you to check the appearance of the web part directly while editing the transformation code.



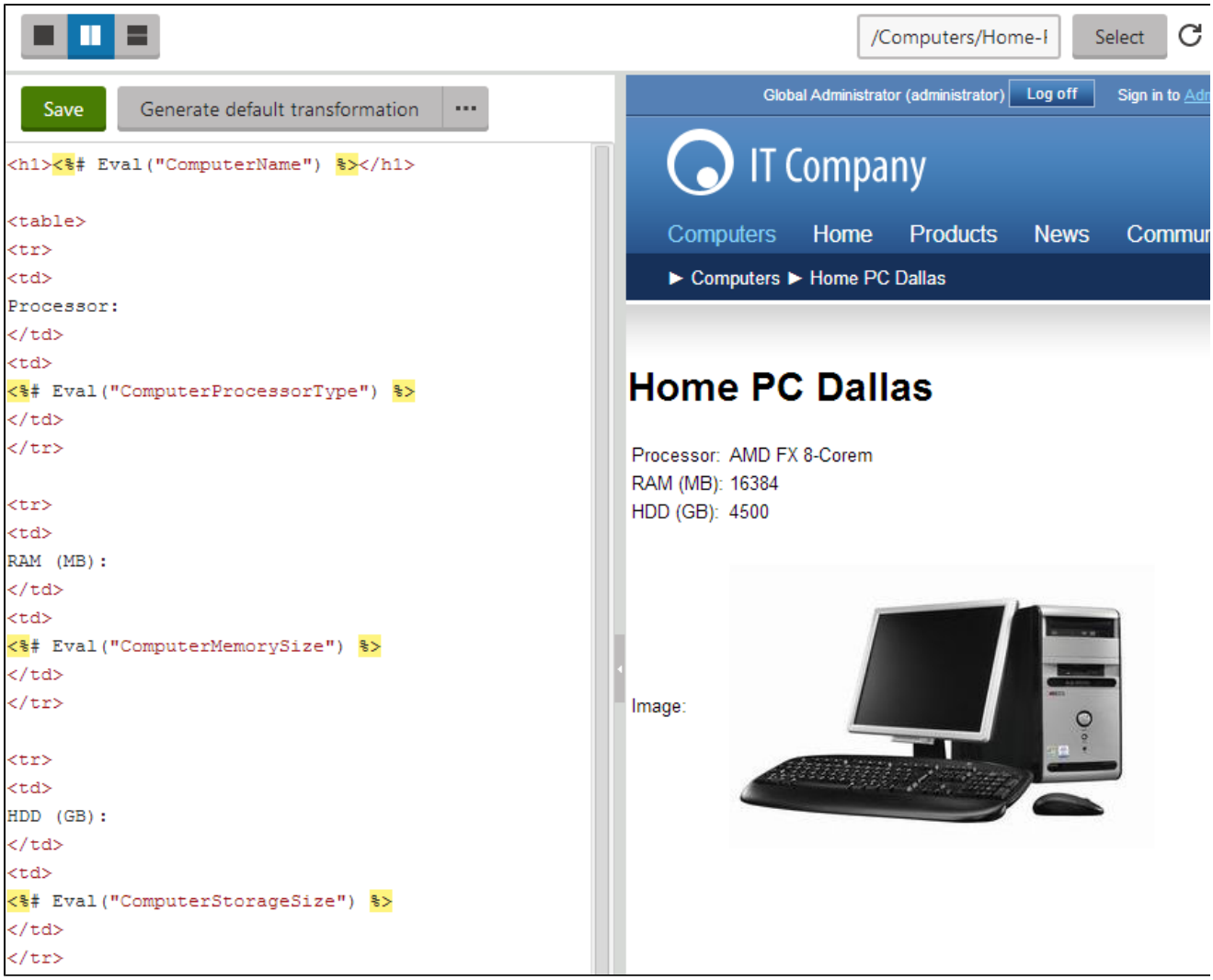
6. Close the **Edit transformation** dialog and click **Edit** next to the *custom.computer.default* transformation in the **Selected item transformation** property.
    - This transformation defines the output that the Datalist shows to users viewing the details of computer pages.

7. Enter the following code:

```
<h1><%# Eval("ComputerName") %></h1>

<table>
<tr>
<td>
Processor:
</td>
<td>
<%# Eval("ComputerProcessorType") %>
</td>
</tr>

<tr>
<td>
RAM (MB):
</td>
<td>
<%# Eval("ComputerMemorySize") %>
</td>
</tr>

<tr>
<td>
HDD (GB):
</td>
<td>
<%# Eval("ComputerStorageSize") %>
</td>
</tr>

<tr>
<td>
Image:
</td>
<td>
<%# GetImage("ComputerImage") %>
</td>
</tr>
</table>
```

8. Click **Save**.

The web part applies the *Selected item transformation* when one of the displayed pages is the currently active page, e.g., when a visitor clicks on the link in the titles of the computers on the **Computers** page. To see how the detail view looks like for a specific computer page, enter */Computers/Home-PC-Dallas* into the path textbox on the preview bar and **Refresh** () the page section.



If you close the configuration dialogs and view the *Computers* page on the live website, you can see that both the list of computers and the details pages of individual computer pages are rendered according to the new data format.

You have learned how to write *ASCX* transformations for displaying the content of structured pages. Other types of transformations may be used in the same way, only with different transformation code syntax.

Note: If you wish to use *XSLT* transformations, you need to display the data through the **XSLT viewer** or **Universal page viewer** web parts (or **CMSViewer** server control).

Transformations for multilingual websites

You may need to display different text in transformations based on the currently selected language. If you are using the built-in multilingual support, you can achieve this by creating a separate transformation for each language, using the appropriate culture code as a suffix in the transformation name.

Example:

- English (default language) transformation code name: *cms.news.detail*
- French transformation code name: *cms.news.detail_fr-fr*

When a user switches the content culture to French, web parts and controls automatically load the French version of the transformation.