



Visual Functions - User Guide

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1 Introduction

Visual functions are a quick and convenient way of presenting dynamic data of a specific type on a page. Creating a Visual function requires no specific skills in programming or editing markup.

A newly created function is ready to be used right away due to the default settings and layout it comes with. You can however change the way a Visual function behaves or look by changing these default settings and the layout.

Let's see how to [create](#) and [use](#) a Visual Function in C1 CMS.

1.1 Before You Begin

A Visual function is always based on a data type existing in C1 CMS - a global data type, a page data folder or a page meta type.

At least one data item of this type must be added before you can create a Visual function to render the type.

One Visual function always stands for one data type. You cannot use a visual function to present data from two or more datatypes.

When creating a Visual function, you can select which data fields to use for rendering as well as sort data items by one field and limit the number of items to display.

2 Creating Visual Functions

To create a Visual function:

1. In the **Functions** perspective, select **Visual Functions** and click **Add Visual Function** on the toolbar.
2. In the first step of the wizard, select a data type to visualize with the function.

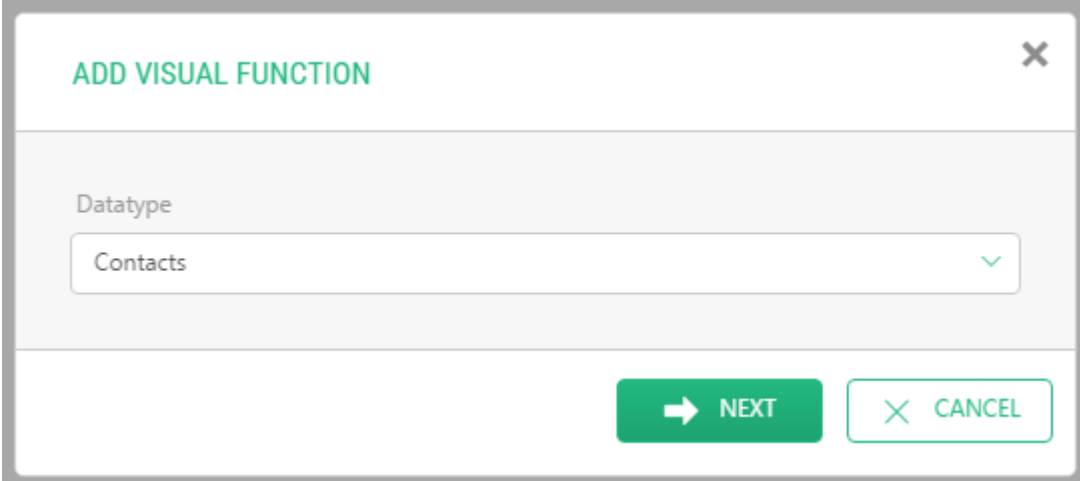


Figure 1: Selecting a data type to visualize

3. In the next step, type in the name and the namespace for the function.

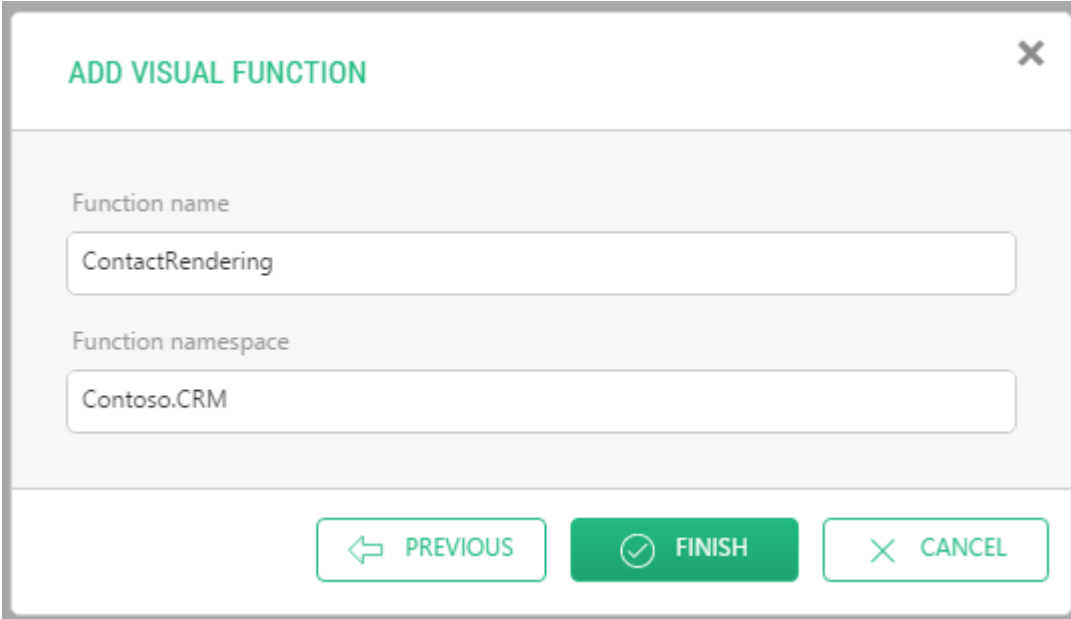


Figure 2: Specifying the name and the namespace

4. Click **Finish**.

The function opens in the function editor.

You can [use the function](#) immediately unless you want to [adjust its settings](#) and [customize the layout](#).

2.1 Adjusting Settings

On the Visual Function Settings tab you can change the default values of the visual function's settings.

The screenshot displays the 'Visual Function Settings' configuration page. At the top, there are tabs for 'FUNCTIONS' and 'CONTACTRENDERING'. Below these are sub-tabs for 'VISUAL FUNCTION SETTINGS', 'VISUAL LAYOUT', and 'PREVIEW'. The main content area is titled 'Visual function' and shows 'Contoso.CRM.Contact'. Underneath, the 'VISUAL FUNCTION SETTINGS' section contains several input fields and controls:

- Function name:** A text input field containing 'ContactRendering'.
- Function namespace:** A text input field containing 'Contoso.CRM'.
- Description:** A large empty text area.
- Item list length:** A text input field containing '10'.
- Item sorting:** A dropdown menu with 'Name' selected.
- List sort order:** Radio buttons for 'Ascending' (selected) and 'Descending'.
- Preview template:** A dropdown menu with 'Front page' selected.

Figure 3: Visual Function Settings

Here are the parameters you can choose to change:

- **Function name:** The name of the function (which you normally specify when creating the function)
- **Function namespace:** The namespace the function belongs to (which you normally specify when creating the function)
- **Description:** The description for the function which the user can read when inserting the function or generating documentation for the function.
- **Item list length:** The number of data items to display (10 by default). Used as a default value when inserting the function.
- **Item sorting:** The field by which the items must be sort. You can also use “(random)” for the value. Used as a default value when inserting the function.

- **Item sort order:** The order of sorting items: ascending or descending (ascending by default). Used as a default value when inserting the function.
- **Preview template:** The page layout template to use for previewing the function's output on the Preview tab.

2.2 Customizing Layout

On the Visual Layout tab, you can customize the way the data will be presented.

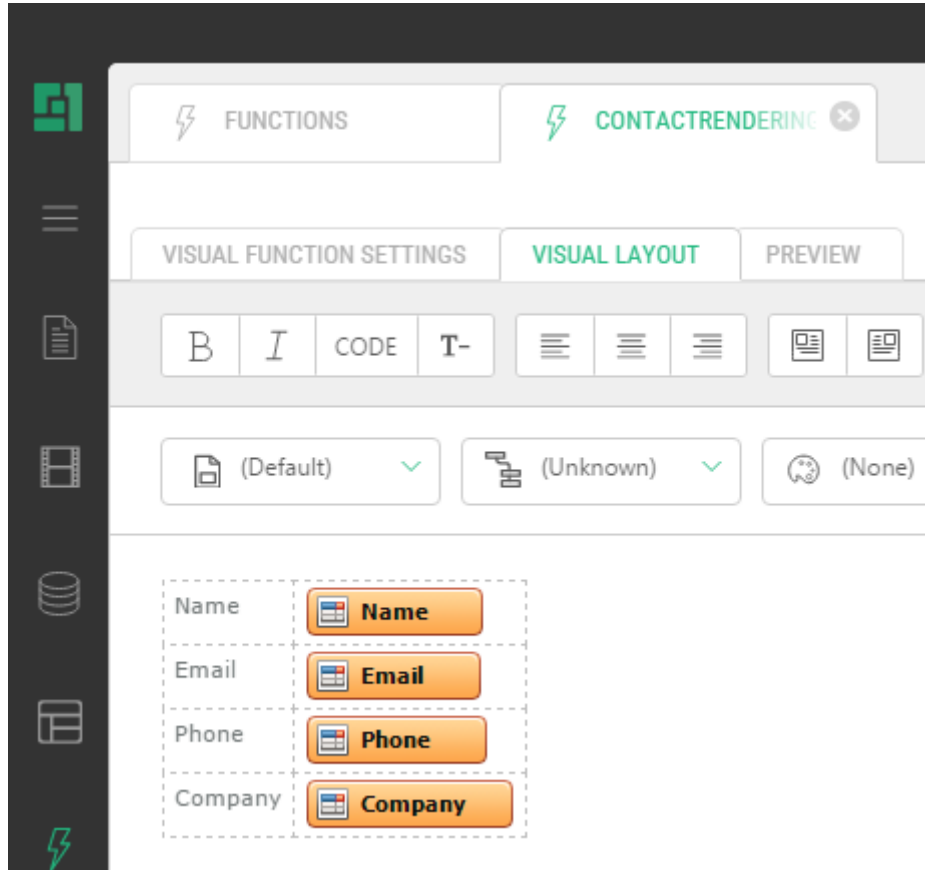


Figure 4: Visual Layout

A special graphic representation is used for a data field. You can remove unnecessary fields by deleting their graphic representations. You can add data fields via the menu: **Insert | Field | (specific field)**.

By default, each data item is presented in a two-column table with field labels in Column 1 and field values in Column 2. Data items are presented in the output as downward repetition of the layout mocked up here.

You can however change the way the data is presented by editing the content on this tab the same way you edit a page in Visual Editor. If you are skilled to edit raw markup, you may as well switch to the Source view and edit the layout markup.

2.3 Previewing Output

You can preview the function's output on the Preview tab.

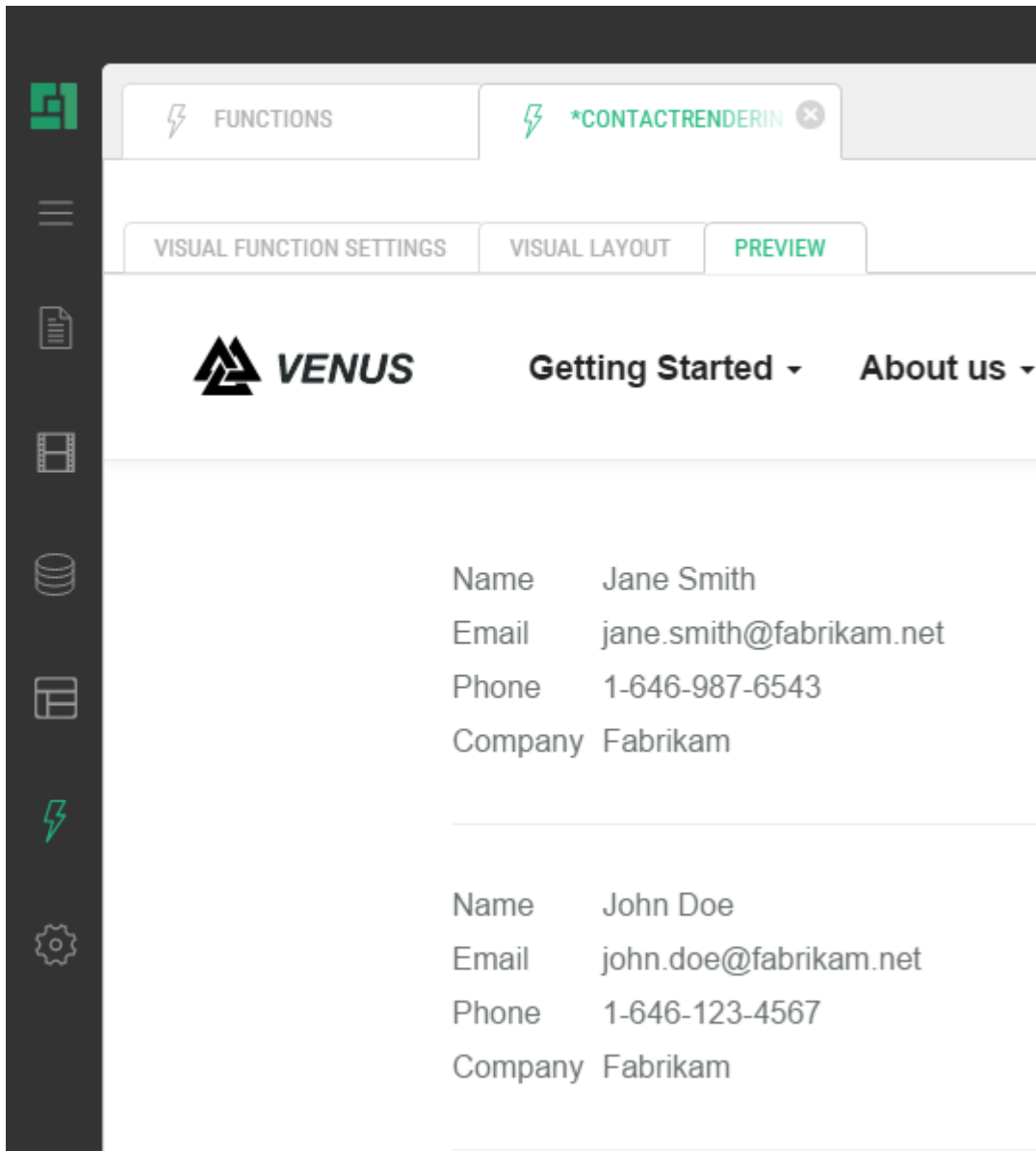


Figure 5: Preview

At least one data item must be added to the data type to appear on the Preview tab.

You can change the page layout template used for previewing in the Preview template parameter on the [Visual Function Settings](#) tab.

3 Using Visual Functions

The use of Visual functions on web pages is no different from that of any other CMS function.

To insert a Visual function on a page:

1. Edit a page and place a cursor where you want the function to appear.
2. On the **Insert** menu, click **Function** and in the **Select Function** window, expand the proper nodes and select the visual function.

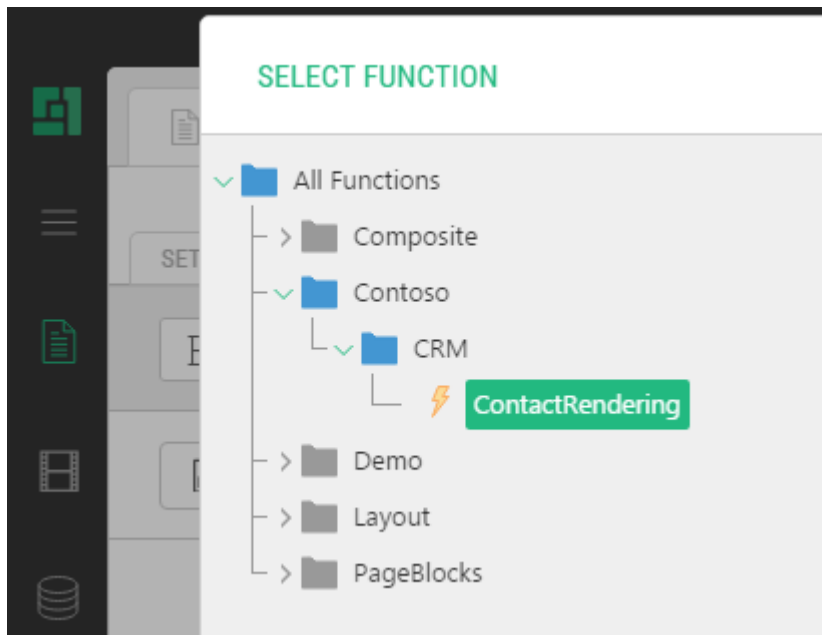


Figure 6: Selecting a visual function

3. Click **OK**.
4. In the **Function Properties** window, change the default values in the parameters if needed.

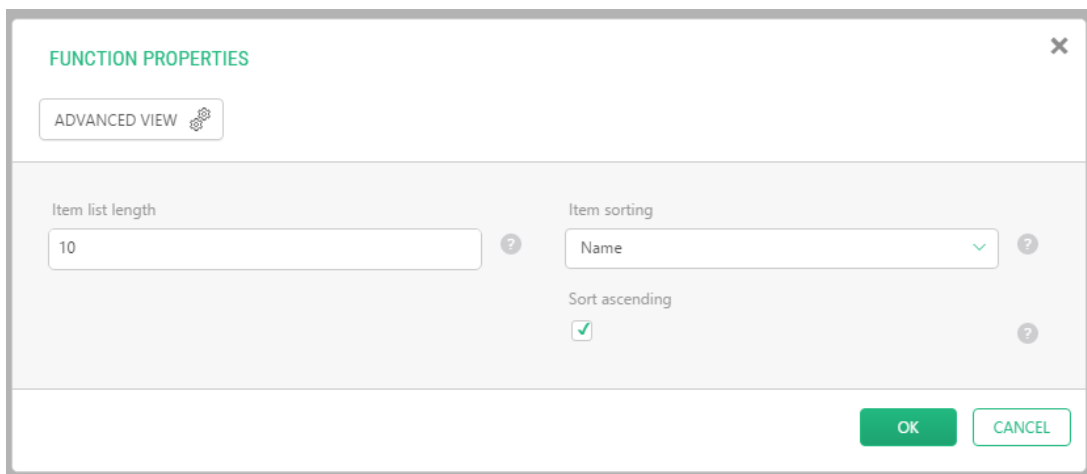


Figure 7: Visual function parameters

5. Click **OK**.

Every Visual function shows three parameters in the Basic view and four parameters – in the Advanced view, each with a default value. Normally, you can insert a Visual function with these defaults.

You can however change the default values of these parameters:

- **List filter:** The selection filter to apply to the data items to display (no filtering by default). (Available in the Advance view only.)
- **Item list length:** The number of data items to display (10 by default).
- **Item sorting:** The field by which the items must be sort. You can also use “(random)”for the value.
- **Item sort order:** The order of sorting items: ascending or descending (ascending by default).

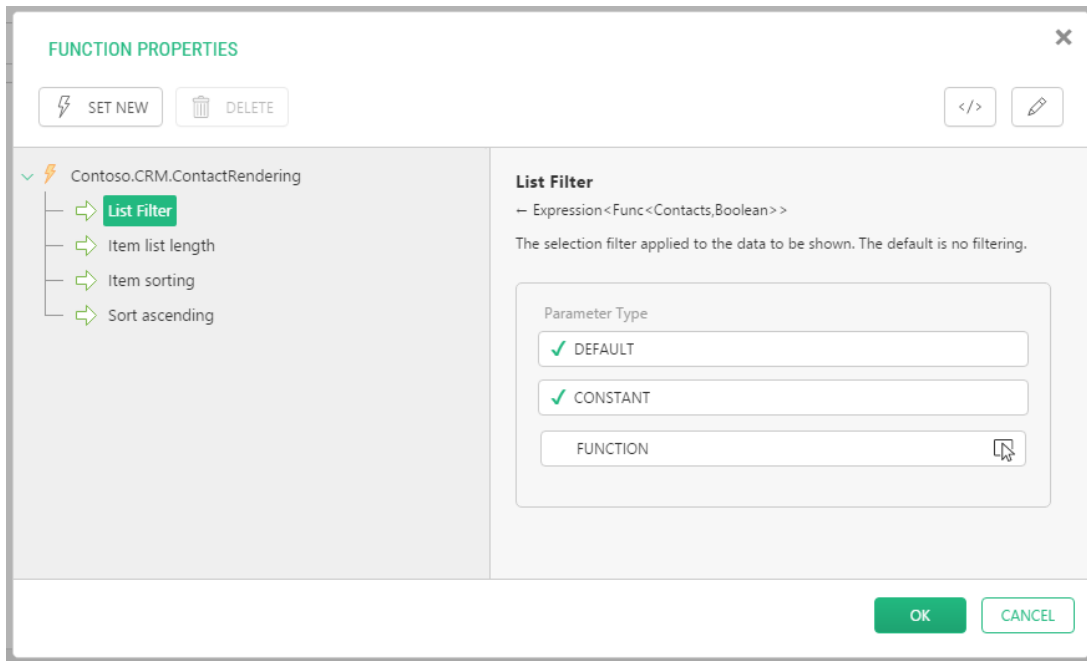


Figure 8: Visual function parameters (Advanced view)

You can set the default values for the last three parameters when editing the visual function and [adjusting its settings](#).

As to the List filter parameter, no filtering is used by default, however, you can apply one or more filters to the data items of the rendered type by using ad-hoc filtering functions. For information on filtering functions, please refer to [“Filtering Data”](#).

4 Test Your Knowledge

4.1 Task: Create a Visual Function

1. Create a global data type "Test.Users" with fields "FirstName" (string (32)), "LastName" (string (32)), "Phone" (string (32)), "Email" (string (64)).
2. Add three data items to the data type.
3. Create a Visual function "Test.UserRendering".

4.2 Task: Adjust Settings

1. Edit the Test.UserRendering function.
2. Write a description for the function.
3. Set the maximum number of data items to display to 5.
4. Select the LastName field to sort data items by.
5. Save the function.

4.3 Task: Customize Layout

1. Edit the Test.UserRendering function.
2. Remove a table row that renders the FirstName data field.
3. Rename "LastName" to "Name".
4. Insert the FirstName field in the same table cell before the LastName field.
5. Save the function.

4.4 Task: Preview Output

1. Edit the Test.UserRendering function.
2. Preview the output.
3. Change the preview template to some other page layout template.
4. Preview the output.

4.5 Task: Insert a Visual Function on a Page

1. Edit a page.
2. Insert the Test.UserRendering function on the page.
3. Change the maximum number of items to display to 2.
4. Save and preview the page.