

EB GUIDE tutorial

Creating a list

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1. Tutorial: Creating a list

Instantiators allow creating lists dynamically during run-time. Based on a datapool item of a list type, an instantiator displays all list elements in a pre-defined layout. If the content of the datapool item is modified, so is the appearance of the instantiator.

The following instructions guide you through the process of creating a list with dynamic content. Each list element consists of a labeled rectangle.

Approximate duration: 10 minutes.



Adding a datapool item

The following instructions guide you through the process of adding a datapool item of a list type. The datapool item provides a value for every list element of the instantiator widget.

Prerequisite:

- The **Main** state machine contains an initial state and a view state.
- The initial state has a transition to the view state.

Step 1

To display content in your list, you add a datapool item of type string list. In the navigation area, point to **Datapool**.

The  button appears.

Step 2

Click .

A menu expands.

Step 3

In the menu, click `String list`.

A new datapool item of type string list is added.

Step 4

Rename the datapool item to `MyStringList`.

Step 5

Select the `MyStringList` datapool item, and go to the **Properties** panel.

Step 6

Next to the `Value` property, click the  button.

An editor opens.

Step 6.1

Click **Add**.

A new entry is added to the table.

Step 6.2

Enter `One` in the **Value** text box.

Step 6.3

Add the values `Two`, `Three`, `Four`, and `Five` to the `MyStringList` datapool item.

Step 6.4

Click **Accept**.

You added a datapool item of type string list. The datapool item contains five entries.

The content of the list is displayed next to the **Value** property.



Adding widgets and arranging the widget hierarchy

Prerequisite:

- You completed the previous instruction.

Step 1

To add widgets to your view, double-click the view state.

The view is displayed in the content area.

Step 2

Drag the following widgets from the **Toolbox** into the view:

- ▶ An instantiator
- ▶ A rectangle
- ▶ A label

Step 3

Rename the instantiator to `MyInstantiator`, the rectangle to `MyRectangle`, and the label to `MyLabel`.

Step 4

In the navigation area, move the widgets in the hierarchy so that the rectangle becomes a child widget of the instantiator, and the label becomes a child widget of the rectangle.

The widget hierarchy now looks as follows.

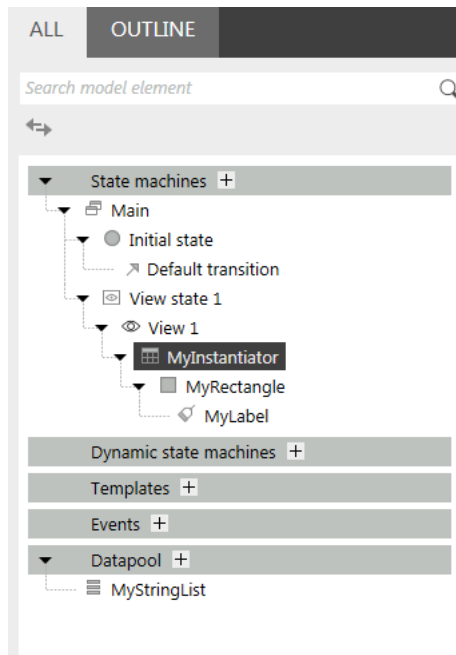


Figure 1. Widget hierarchy with an instantiator

You added three widgets to the view and changed the hierarchy of the widgets.



Configuring the instantiator

Prerequisite:

- You completed the previous instruction.

Step 1

To change the properties of instantiator, select the instantiator, and go to the **Properties** panel.

Step 2

Enter 300 in the `width` text box, and in the `height` text box.

Step 3

Enter 5 in the `numItems` text box.

Step 4

In the **Widget feature properties** category, click **Add/Remove**.

The **Widget features** dialog is displayed.

Step 5

Under **Available widget features**, expand the **Layout** category, and select the **Flow layout** widget feature.

Step 6

Click **Accept**.

The related widget feature properties are added to the instantiator and displayed in the **Properties** panel.

Step 7

Enter 5 in the `verticalGap` text box.



Configuring list element texts

Prerequisite:

- You completed the previous instruction.

Step 1

To change the appearance of the label, select the label, and go to the **Properties** panel.

Step 2

Enter 0 in the `x` and `y` text box.

Step 3

Add a link from the label's `width` property to the rectangle's `width` property.

Step 3.1

Next to the `width` property, click the  button.

A menu expands.

Step 3.2

In the menu, click **Add link to widget property**.


A dialog opens.

Step 3.3

In the dialog, go to the rectangle, and select its `width` property.

Step 3.4

Click **Accept**.

The dialog closes. The  button is displayed next to the `width` property.

Step 4

Add a link from the label's `height` property to the rectangle's `height` property.

Step 5

Next to the `horizontalAlign` property, click .

You changed the appearance of the label. The height and the width are equal to the properties of the rectangle.



Configuring list elements

Prerequisite:

- You completed the previous instruction.

Step 1

To change the appearance of the rectangle, select the rectangle, and go to the **Properties** panel.

Step 2

To make sure that the list elements use all available width, add a link from the rectangle's `width` property to the instantiator's `width` property.

Step 3

Enter 50 in the `height` text box.

Step 4

To refer to each line of your list, you add the **Line index** widget feature.

The `lineIndex` property is added to the rectangle's properties.

Step 5

To assign the elements of `MyStringList` to `MyLabel` for every element of your list, add a user-defined property.

In the **User-defined properties** category, click .

A menu expands.

Step 6

In the menu, click **Conditional script**.

Step 7

Rename the property to `SetText`.

Step 8

Next to the `SetText` property, click **Edit...**

A script editor opens in the content area.

Step 9

In the **Trigger** category, add the `lineIndex` property of the rectangle.

Step 10

Enter the following EB GUIDE Script:

```
function (v:arg0::bool)
{
  v:this->"MyLabel".text=dp:MyStringList [v:this.lineIndex];
  false
}
```

You changed the appearance of the rectangle. With the `SetText` property, the elements of `MyStringList` are assigned to `MyLabel` for every entry of your list.



Testing the EB GUIDE model

Prerequisite:

- You completed the previous instruction.

Step 1

To start the simulation, click  in the command area.

Result:

Five rectangles that are labeled from one to five are displayed in vertical arrangement.

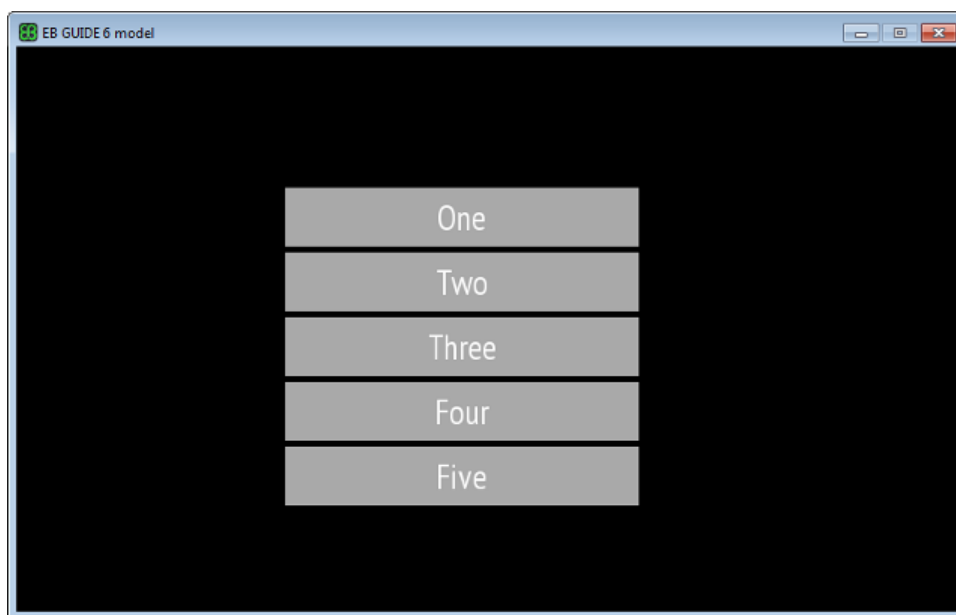


Figure 2. List created with an instantiator