

Web screens focused on Customer-facing

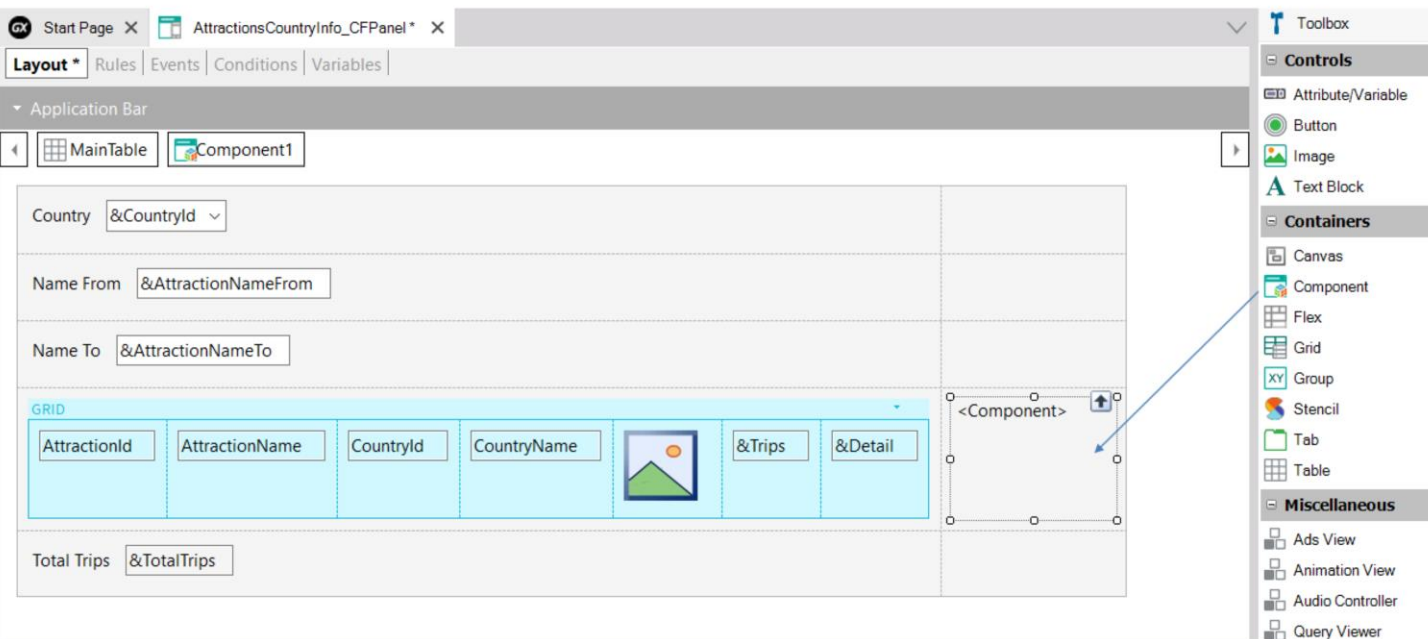
Using Components and Master Panel object

GeneXus™

Components

The panel object enables you to encapsulate functionality through the use of components, just like web panels with web components. Let's see an example of their use.

Using a panel inside another panel



To build a panel object that will show the attractions and data of a selected country, this time the information will be deployed using a component within the panel that is created.

To create the panel that will contain the component, do a Save As of Attractions_CFPANEL, and call it AttractionsCountryInfo_CFPANEL.

Insert a Component control, from the toolbox, to the right of the attractions grid.

Just as you did before, when you click on the name of a country in the grid, you will be opening the information about that country.

Creating the panel to be used as component

The screenshot illustrates the process of creating a component panel in GeneXus. On the left, the 'Rules' tab shows a parameter rule: `Parm(in:CountryId);`. The 'Layout' tab shows a 'MainTable' containing a 'CountryName' text field and a 'GRID' containing a 'CityName' text field. On the right, the 'Data Provider ViewCountryCities_Level_Detail' node is configured with the 'Country' table, and the 'Data Provider ViewCountryCities_Level_Detail_Grid1' node is configured with the 'CountryCity' table. Both data providers are linked to the 'CountryId' parameter.

Now you will create the panel that will be associated to the component. Its name will be ViewCountryCities. Drag the CountryName attribute from the toolbar, and a grid with the CityName attribute. To the grid, assign its base transaction in Country.City. Then add a Parm with the CountryId attribute.

If you check the panel's navigation list, in the Level_Detail node you will see that the Country table, filtered by the CountryId attribute of the Parm rule, will be run over, so one single record corresponding to the country received by parameter will be retrieved.

In the Level_Detail_Grid1 node you will see that the grid runs over the CountryCity table, which was also filtered by the CountryId received by parameter.

Properties in the component

The screenshot shows the GeneXus IDE interface. The main workspace displays a form with the following elements:

- Country:
- Name From:
- Name To:
- GRID:

AttractionId	AttractionName	CountryId	CountryName		&Trips	&Detail
- Total Trips:

The Properties panel on the right shows the properties for **Component1**:


Control Name	Component1
Object	ViewCountryCities
Parameters	&CountryIdentifier
Appearance	
Auto Grow	True
Class	Table
Visible	True
Invisible Mode	Keep Space
Cell information	
Row Span	1
Col Span	1
Horizontal Alignment	Default
Vertical Alignment	Default

Now, in the properties of Component1, in Object, select the ViewCountryCities panel; and in Parameters add the &CountryIdentifier variable. This variable will save the value of the CountryId attribute of the row in the selected grid.

One difference that you will see here in relation to web panels is that here you will not need to change the type of the ViewCountryCities_CFPANEL for it to be a component, because when you insert a Component control, you may choose to insert any of the panels created before.

Dynamic creation of the panel used as component

```
41 Event CountryName.Tap
42     &CountryIdentifier = CountryId
43     Component1.Object = ViewCountryCities_CFPANEL.Create(&CountryIdentifier)
44 Endevent
45
```



Component: Component1	
Control Name	Component1
Object	ViewCountryCities
Parameters	&CountryIdentifier

Now you have to invoke the component panel when you click on the country name in the attractions grid, so you program the Tap event of the CountryName attribute with the invocation.

Firstly, save the CountryId corresponding to the CountryName selected, in the &CountryIdentifier variable defined previously, and then dynamically create the ViewCountryCities_CFPANEL object associated to Component1, using the Create command and passing the country selected by parameter.

Since the panel you are building is already main, you will execute it with Run.

In runtime...

Name From	Name To	Country			
Christ the Redemmer	Brazil		1	Details	
Cinque Terre	Italy		0	Details	
Eiffel Tower	France		1	Details	
Forbidden city	China		0	Details	
Glenfinnan Viaduct	Scotland		0	Details	
London Towers	England		0	Details	
Long Bridges	United States		0	Details	
Louvre	France		0	Details	
Matisse Museum	France		1	Details	
Meet the	China		0	Details	

Total Trips 3

Country Name: China

City Name: Beijing

City Name: Shanghai

City Name: Hong Kong

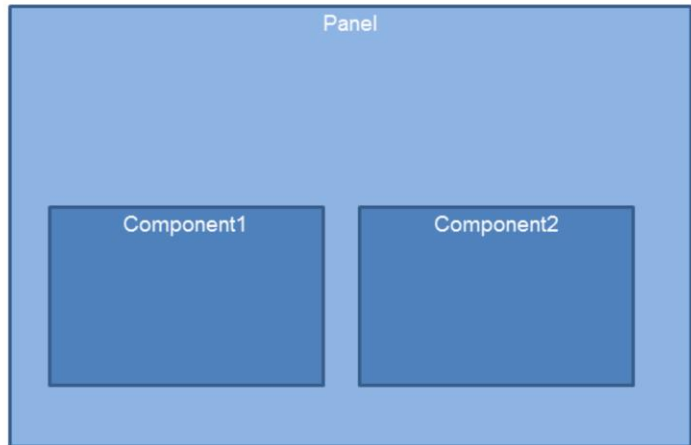
Click on country China and you will see that China's cities are shown: Beijing, Shanghai and Hong Kong.

Triggering order of events

ClientStart (Panel)
Start (Panel)
Refresh (Panel)
Load (Panel)

ClientStart (Component1)
Start (Component1)
Refresh (Component1)
Load (Component1)

ClientStart (Component2)
Start (Component2)
Refresh (Component2)
Load (Component2)



The panel objects you insert as components inside another panel include the same events that they had as a panel: that is, the system events on the client side (ClientStart and Back), and the events on the server side (Start, Refresh, and Load).

This means that you must consider the order in which events will be triggered from the component or components that you have in the panel, in relation to the events of the host panel.

The first events to be triggered are those in the panel that contains the components, in the usual order seen before, that is: ClientStart, Start, Refresh, and Load.

Then, from top to bottom, and from left to right, the events of each panel included as component, also in the usual order.

Master Panel Object

Let's now see what the Master Panel object is about.

Master Panel Object

Start Page X Attractions_CFPANEL X

Layout Rules Events Conditions Variables

Application Bar


MainTable

Country &CountryId

Name From &AttractionNameFrom

Name To &AttractionNameTo

GRID

AttractionId	AttractionName	CountryId	CountryName		&Trips	&Detail
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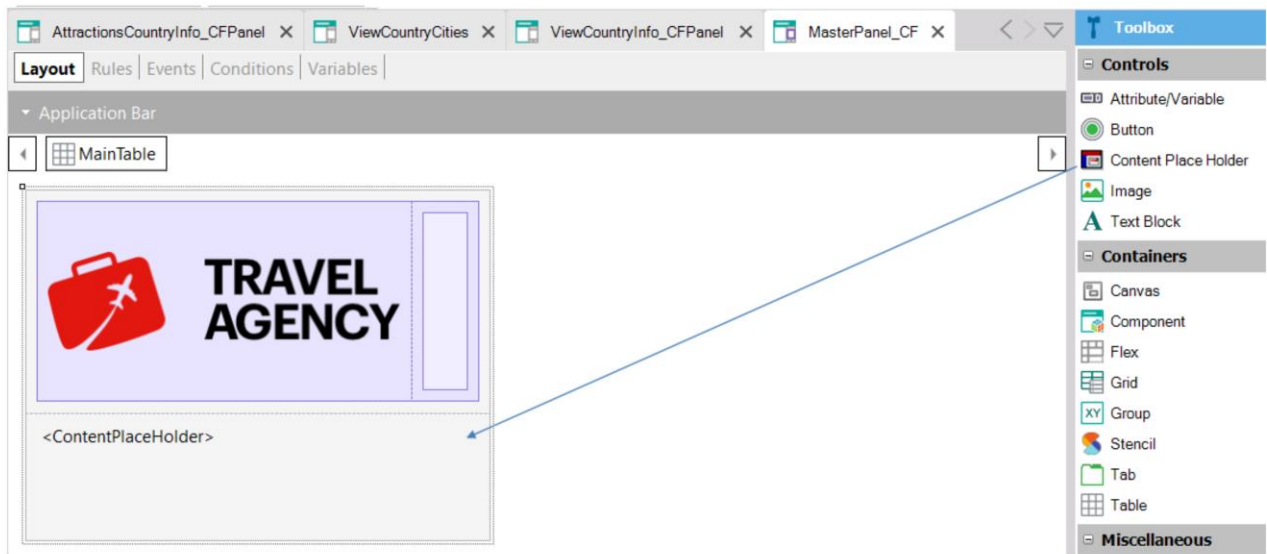
Total Trips &TotalTrips

Properties	
Filter	
Panel: Attractions_CFPANEL	
Name	Attractions_CFPANEL
Description	Attractions_CFPANEL
Module/Folder	FrontendAngular
Qualified Name	Attractions_CFPANEL
Object Visibility	Public
Main program	False
Master Panel	(none)
Caption	Attractions_CFPANEL

If you look at the properties of panel object Attraction_CFPANEL, you will see that one of them is the **Master Panel** property, which appears empty in the panel. There is an indication there of the master page that will contain the panel object and where it will be loaded. This concept is analogous to the concept of Web Master Panel shown for web panels.

However, unlike the latter, a panel object does not have a property for changing types. Here, the Master Panel object is an object independent from the panel object.

Master Panel Object (continued)



Now you will create an object of the Master Panel type with the name MasterPanel_CF.

If you go to the toolbar you will see that you have available a container control, Content Place Holder, where panel objects will be loaded.

Now insert the Content Place Holder in the web panel. Then insert a table above it, and an image with the agency's logo inside the table, with a table to the right to aid you in keeping the logo aligned on the left.

Master Panel Object (continued)

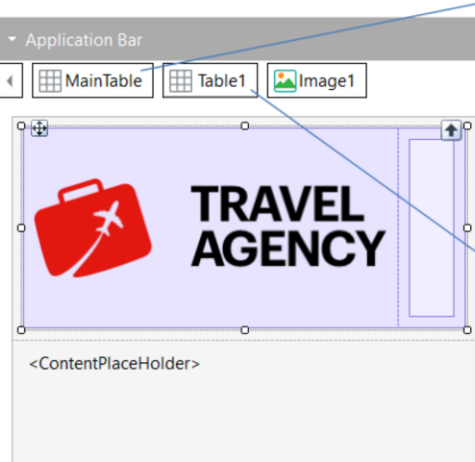


Table: MainTable

Control Name	MainTable
Appearance	
Columns Style	100%
Rows Style	100dip;pd
Width	100%
Height	100%
Auto Grow	True

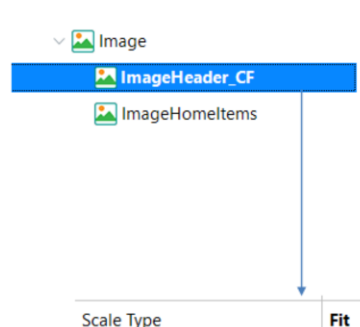


Table: Table1

Control Name	Table1
Appearance	
Columns Style	320dip;100%
Rows Style	90dip
Width	100%
Height	90dip

Scale Type	Fit
------------	------------

Adjust the table's properties and the properties of the MainTable to view the image well. Also create class, ImageHeader_CF, and assign to it the Scale Type property with value Fit, and assign that class to the logo image. Then save.

Master Panel Object (continued)

Panel: Attractions_CFPANEL

Name	Attractions_CFPANEL
Description	Attractions_CFPANEL
Module/Folder	FrontendAngular
Qualified Name	Attractions_CFPANEL
Object Visibility	Public
Main program	True
Master Panel	MasterPanel_CF
Caption	Attractions_CFPANEL

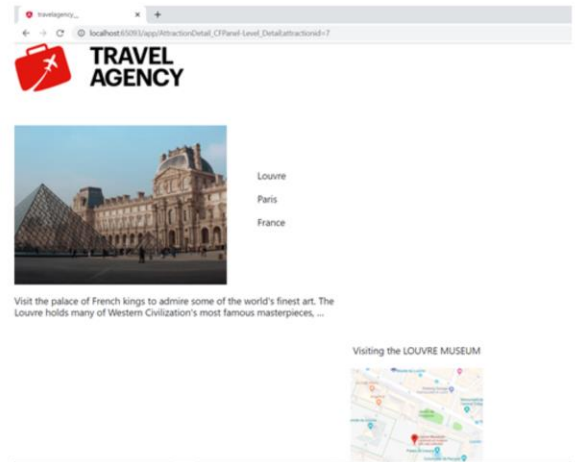
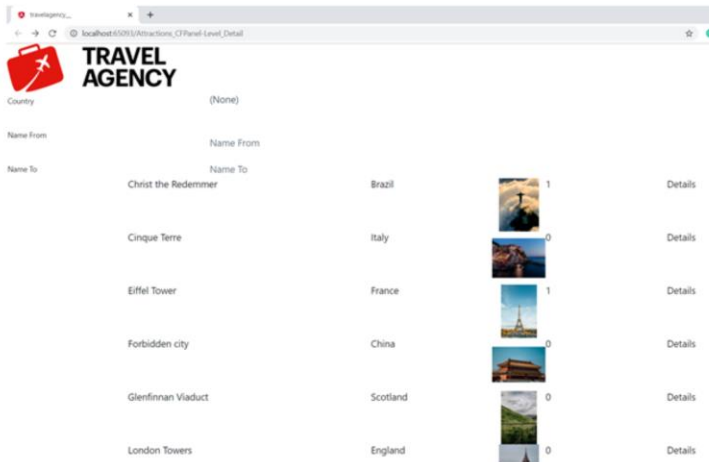
Panel: AttractionDetail_CFPANEL

Name	AttractionDetail_CFPANEL
Description	Attraction Detail_CFPANEL
Module/Folder	FrontendAngular
Qualified Name	AttractionDetail_CFPANEL
Object Visibility	Public
Main program	False
Master Panel	MasterPanel_CF
Caption	Attraction Detail_CFPANEL

Now assign the Master Panel property to the Attractions_CFPANEL and AttractionDetail_CFPANEL panels with the MasterPanel_CF object you have just created.

And execute.

Executing the application with an assigned master panel



You will see that the agency's logo appears, with the Attractions_CFPanel loaded below it. If you click on Details of country France, you will note that the attraction's detail panel has the same logo.

This time, we will not consider the particulars of the Design System for the Master Panel object, but something we can say in advance is that the Theme object and the classes are used in a way similar to use of web panels.

The design issued will be part of an upcoming video.



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