

Maps, Rating, and Switch Controls

GeneXus™

This video will continue the study of various types of controls that aid in the enhancement of the user experience for your travel agency app.

Map Control

Start with the Map control, to view information on a map.

View_Restaurants Panel

Table: Grid1Table	
Control Name	Grid1Table
Layout Name	
Appearance	
Columns Style	400dip;10dip;100%
Rows Style	400dip
Width	100%
Height	400dip
Auto Grow	True

As part of the services offered by the travel agency, there is a list of restaurants for each city, including directions and rating for each restaurant.

To solve this requirement, you import an xpz file with the Restaurant transaction, the Restaurant_DataProvider that will automatically load the data, and the photos of restaurants that will be included in the KB. The xpz will also add the CountryFlag attribute to the Country transaction, and the images of each country's flag to the KB.

When you open the Restaurant transaction you will see that, in addition to the regular data, like Identifier, Name, Photo, Address, Country and City, the attribute RestaurantGeolocation, of the Geolocation domain type, is also included for geolocation, as well as one of the numeric type called RestaurantRating for the rating, and another one of the Boolean type called RestaurantIsOpen for indicating whether the restaurant is open or not.

To view the restaurant data in your app, create the View_Restaurants panel, set it up as main, and include in it a grid with the attributes RestaurantPhoto, RestaurantName, RestaurantAddress, CityName, and CountryName.

Then modify the grid design for the photo to appear on the left, and, to the right, insert a table as separator. To the right of this table insert another table where you will move the rest of the attributes.

Adjust the properties of the grid table for the columns to respectively occupy 400 dips and 100%, and also adjust the Row Style property with value 400 dips.

Setting up the grid to view it as a map

The screenshot shows the GeneXus IDE interface. At the top, there is a menu bar with 'Layout *', 'Rules', 'Events', 'Conditions', 'Variables', and 'Documenta'. Below it is an 'Application Bar' with a dropdown arrow. The main workspace contains a control titled 'GRID' with a map icon. The control is divided into two sections: a light blue area on the left and a light purple area on the right containing four text input fields labeled 'RestaurantName', 'RestaurantAddress', 'CityName', and 'CountryName'. To the right of the workspace is a properties panel for 'Grid: Grid1'. The panel has two sections: 'Grid' and 'Control Info'. The 'Grid' section includes properties like 'Control Name', 'Collection', 'Default Action', 'Selection Type', 'Enable Multiple Selec', 'Pull To Refresh', 'Inverse Loading', and 'Default Selected Item'. The 'Control Info' section includes 'Control Type', 'Auto Grow', 'Show My Location', 'Map Type', and 'User Can Choose M'. The 'Control Type' is set to 'Maps' and 'Map Type' is set to 'Standard'. At the bottom of the 'Control Info' section, there is a 'Location Attribute' property set to 'RestaurantGeolocation'.

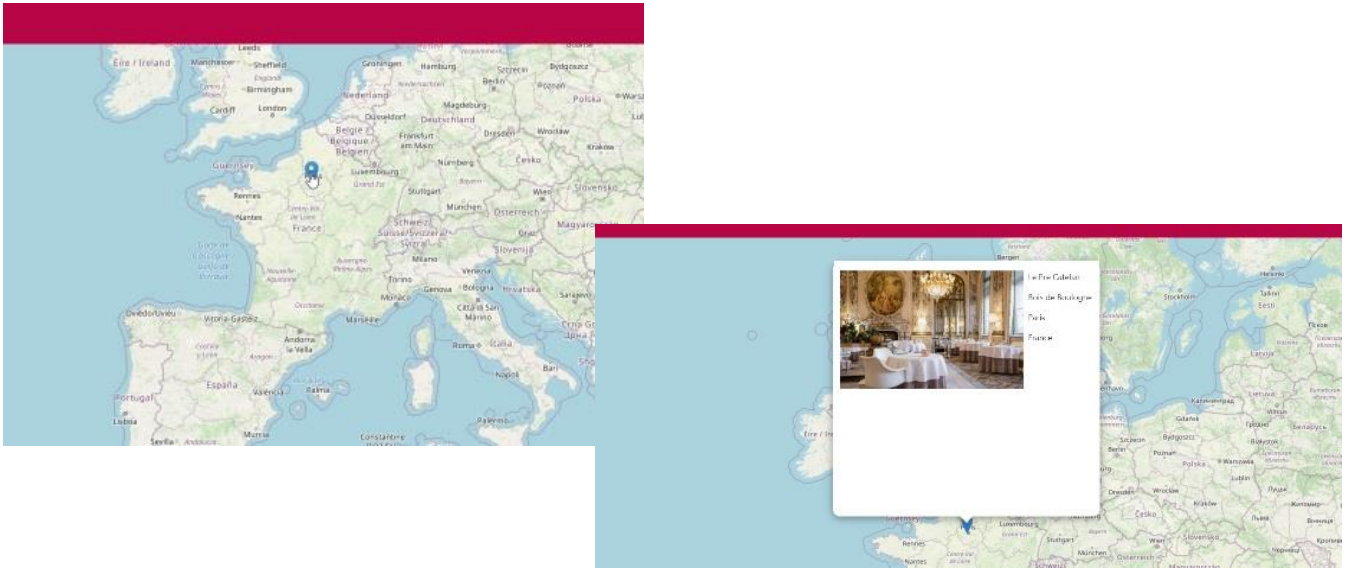
Grid: Grid1	
Control Name	Grid1
Collection	
Default Action	<default>
Selection Type	Platform Default
Enable Multiple Selec	False
Pull To Refresh	False
Inverse Loading	False
Default Selected Item	(none)
Control Info	
Control Type	Maps
Auto Grow	False
Show My Location	False
Map Type	Standard
User Can Choose M	False
Location Attribute	RestaurantGeolocation ...

The grid that shows the list of restaurants should not appear in a standard manner but rather showing locations (pins) on a map, since the geolocation of each restaurant (longitude and latitude) is available.

To that end, use the grid's Control Type property and select Maps. Control type is a property of some controls that affects the way in which the control is shown and used. Depending on the type selected, different specific properties will be displayed for each type in order to be configured.

Now select the RestaurantGeolocation attribute in the Location Attribute property.

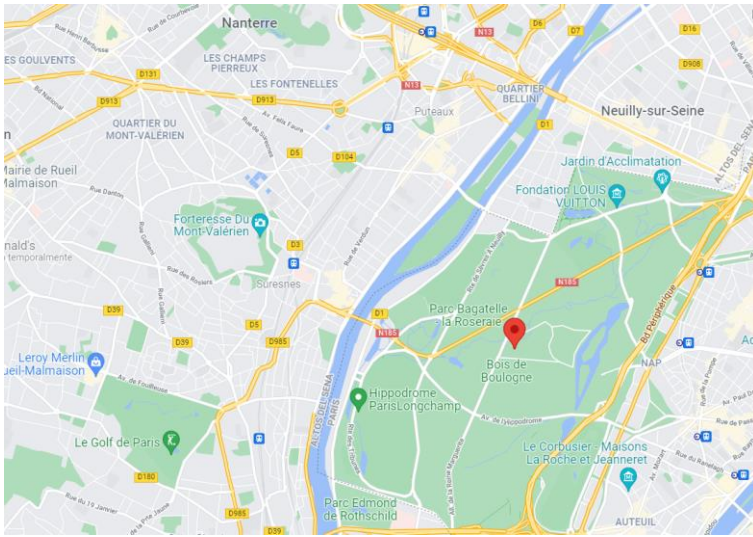
In runtime...



As you will see, a map is shown with a number of pins indicating geolocation points, in this case, with the location of each restaurant.

When you click on a pin in the map, you will see that the element selected is shown, with data on the restaurant and with the design you defined in the grid.

Properties of the Maps Control



Control Info	
Control Type	Maps
Auto Grow	False
Show My Location	False
Map Type	Standard
User Can Choose Map Type	False
Location Attribute	RestaurantGec ...
Geometry Layer Id Attribute	
Geometry Layer Id Field Specifier	
Pin Show My Location	(none)
Pin Image	(none)
Pin Image Attribute	(none)
Point Image Class	MapPinImage
Line Class	MapRoute
Polygon Class	MapPolygon
Show Navigation on Full Screen	True
Show Traffic	False
Initial Zoom	Show all points
Center	Default
Selection Layer	False
Directions Layer	False
Animations Layer	False
Editable Geographies	None

Going back to the grid's properties, you will see that selecting the Control Type property in Maps enabled a series of properties that may be set up in order to change the map type (Standard, Satellite, or Hybrid), the pin's image, the initial zoom, and so on, and thus customize the map's appearance.

Rating Control

Now consider the Rating control for numeric attributes that allows you to assign a rating from a configurable range.

Adding the RestaurantRating attribute to the grid

The screenshot illustrates the GeneXus IDE interface for adding a new attribute to a grid. On the left, the 'Restaurant' entity is listed with attributes: RestaurantId (Id), RestaurantName (Name), RestaurantImage (Image), RestaurantAddress (Address, GeneXus), CountryId (Id), CountryName (Name), CityId (Id), CityName (Name), RestaurantGeolocation (Geolocation, GeneXus), RestaurantRating (Numeric(4.0)), and RestaurantIsOpen (Boolean). The 'RestaurantRating' attribute is highlighted with a blue arrow pointing to its corresponding input field in the 'GRID' control. The 'GRID' control is shown with a vertical list of input fields: RestaurantName, RestaurantAddress, CityName, CountryName, and RestaurantRating. The 'RestaurantRating' field is currently empty. The 'Control Info' window on the right shows the 'Rating' control type selected under the 'Behavior' section.

Name	Type
Restaurant	Restaurant
RestaurantId	Id
RestaurantName	Name
RestaurantImage	Image
RestaurantAddress	Address, GeneXus
CountryId	Id
CountryName	Name
CityId	Id
CityName	Name
RestaurantGeolocation	Geolocation, GeneXus
RestaurantRating	Numeric(4.0)
RestaurantIsOpen	Boolean

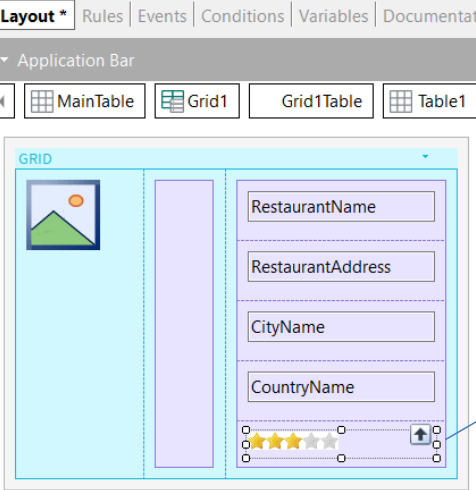
Control Type	Edit
Auto Grow	Combo Box
Input Type	Radio Button
Behavior	Edit
Input History	Check Box
Is Password	Dynamic Combo Box
Cell information	Rating
Row Span	Scanner

Remember that you have the RestaurantRating attribute, of the numeric type and length 4. In this case, you will see the value entered by the user, as a rating in stars, for the RestaurantRating attribute, from 1 to 5 stars, depending on the attribute's numeric value.

So, drag the RestaurantRating attribute to the grid table, below the other attributes, and assign its Label Position property as None.

Select the attribute and check its properties, and you will see that the controls of the attribute or variable types include the Control type property to be configured, varying the default behavior. The control types available will depend on the type of control data,

Setting up the control type in Rating



The screenshot shows the GeneXus IDE interface. At the top, there are tabs for 'Layout *', 'Rules', 'Events', 'Conditions', 'Variables', and 'Documentat'. Below these is an 'Application Bar' with buttons for 'MainTable', 'Grid1', 'Grid1Table', and 'Table1'. The main workspace displays a 'GRID' control with a light blue background. On the left is a small image of a landscape. On the right, there are four text input fields labeled 'RestaurantName', 'RestaurantAddress', 'CityName', and 'CountryName'. At the bottom of the grid is a star rating control with five stars, the first two of which are filled yellow. An arrow points from this star rating control to the 'Control Info' table on the right.

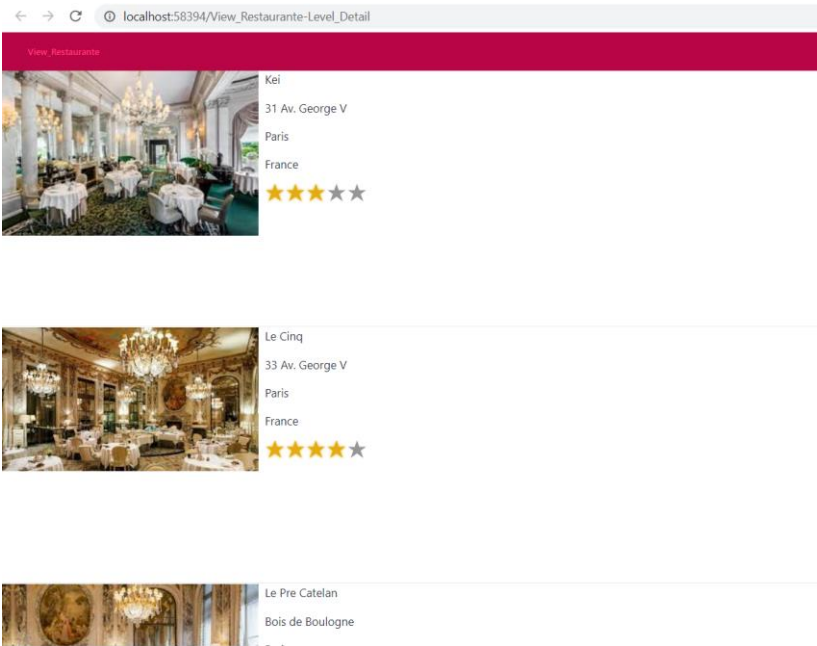
Control Info	
Control Type	★ Rating
Max Value	5
Step	1
Cell information	
Row Span	1
Col Span	1
Horizontal Alignmen	Default
Vertical Alignment	Default

Selecting the value Rating as Control Type of the attribute will enable properties to indicate the maximum star value. In this case leave the default value as 5, and the increase to reach the maximum value from value 1, which by default will be one at a time.

When the user selects 2 stars (in editing a restaurant), the value stored will be 2 and the maximum will be 5.

Also note that, in design time, the attribute RestaurantRating is visually seen as a stars bar on the grid.

Execute to view this.



You will see that, for each restaurant, you can view its grading in a number of yellow stars, according to the values stored in the `RestaurantRating` attribute.

For example, the Kai restaurant has a rating of three stars and the restaurant Le Cinq has four stars.

Switch Control

And last, see the use of the Switch control you have available to use with Boolean attributes for modeling on/off functionalities.

The screenshot displays the GeneXus IDE interface. On the left, a data model for 'Restaurant' is shown with the following attributes and types:

Name	Type
Restaurant	Restaurant
RestaurantId	Id
RestaurantName	Name
RestaurantImage	Image
RestaurantAddress	Address, GeneXus
CountryId	Id
CountryName	Name
CityId	Id
CityName	Name
RestaurantGeolocation	Geolocation, GeneXus
RestaurantRating	Numeric(4.0)
RestaurantIsOpen	Boolean

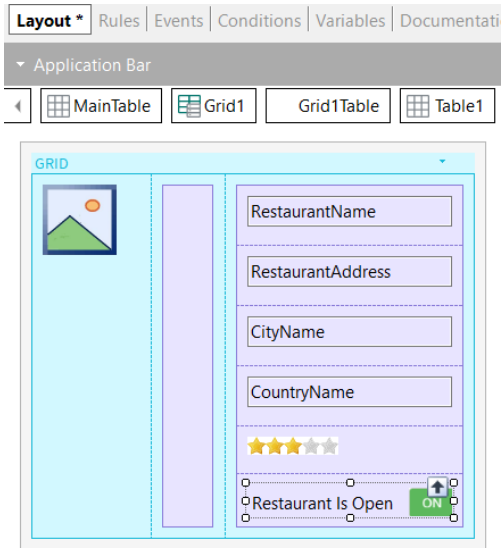
At the top, the 'Layout' tab is active, showing an 'Application Bar' with controls for 'MainTable', 'Grid1', 'Grid1Table', and 'Table1'. The 'GRID' control is selected, showing a visual layout of the data model attributes. A blue arrow points from the 'RestaurantIsOpen' attribute in the data model to its corresponding checkbox control in the grid layout.

On the right, the 'Control Info' panel is visible, showing the 'Control Type' property set to 'Check Box'.

To show, for each restaurant, whether it is open or not, you have the RestaurantIsOpen attribute, of the Boolean type, which stores that information.

Add the RestaurantIsOpen attribute to the grid, below the stars, and leave the label in its default caption and position.

Now select the attribute, and in its Control Type property select the value SDSwitch.

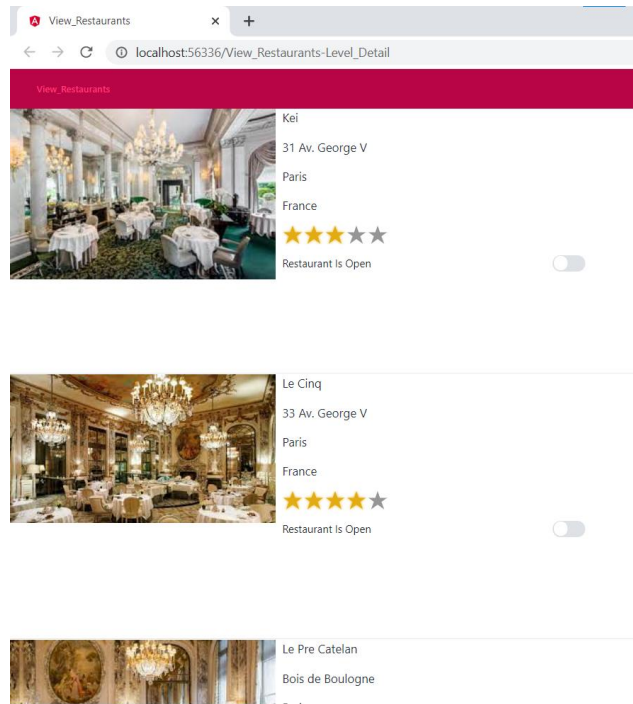


Control Info

Control Type	SDSwitch
Auto Grow	False
On Text	ON
Off Text	OFF
Checked Value	true
Unchecked Value	false

You will see that the appearance on the grid changed to an on/off button, and now you have available several properties to customize it.

Leave the default values and execute the panel.















Note that, for each restaurant, now you have the chance of knowing whether it is open or not at the time of the query.

In this case you cannot edit these values, because to do so you should execute the travel agency's backoffice.

Control types that may be used

For Attributes or Variables

-  Combo Box
-  Radio Button
-  Edit
-  Check Box
-  Dynamic Combo Box
-  Scanner
-  SD LinearGauge
-  SDMultiWheel
-  SDPhysicalMeasure
-  SDWheel
-  SDSwitch
-  ToggleButtonGroup

For Grids

- Charts
- Flex Grid
- Grid
- Horizontal Grid
- Image Map
- Legacy Grid
- Magazine Viewer
- Maps
- Matrix Grid
- Spark Line

This video showed how to change the appearance of a grid or the appearance of attributes.

There are many more types of controls that can be used in your apps, as shown on screen, to enhance the user experience of the travel agency application.

You may also use the controls available on the toolbar and even design your own controls, as it will be shown in another video.

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