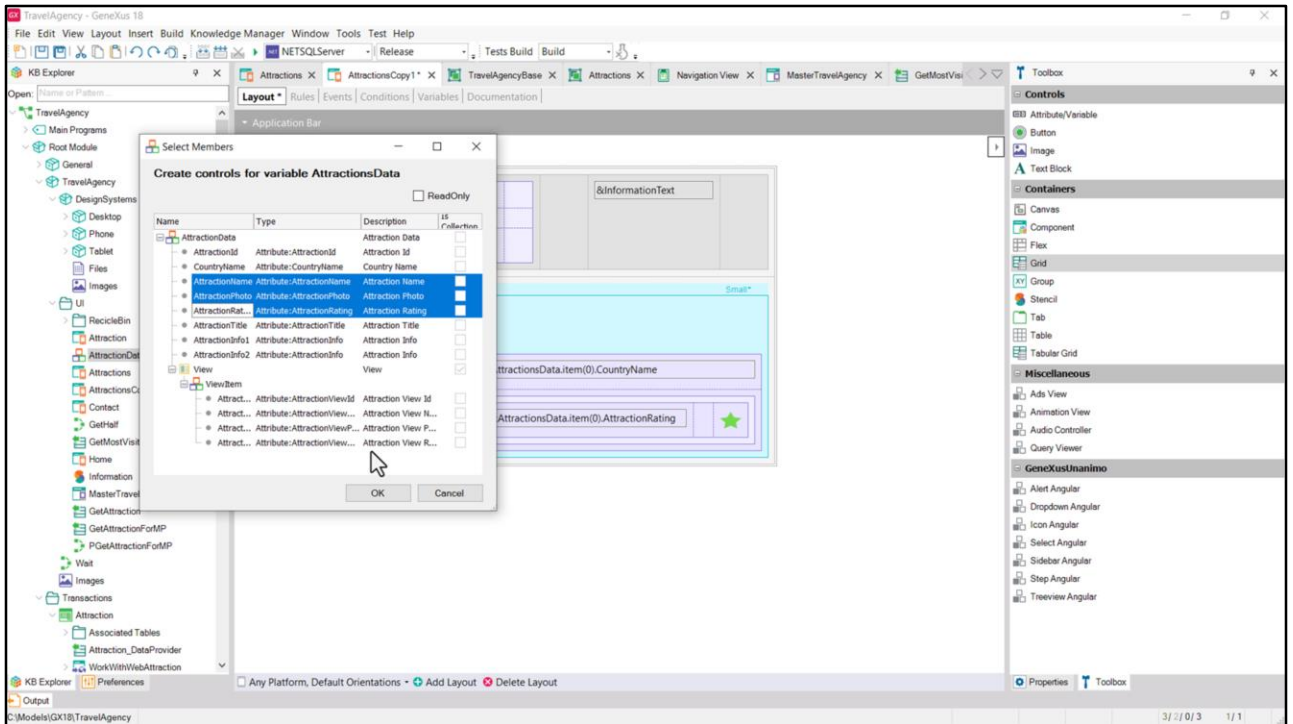


Attractions Panel: Carousel (Grid control) part 2



Cecilia Fernández

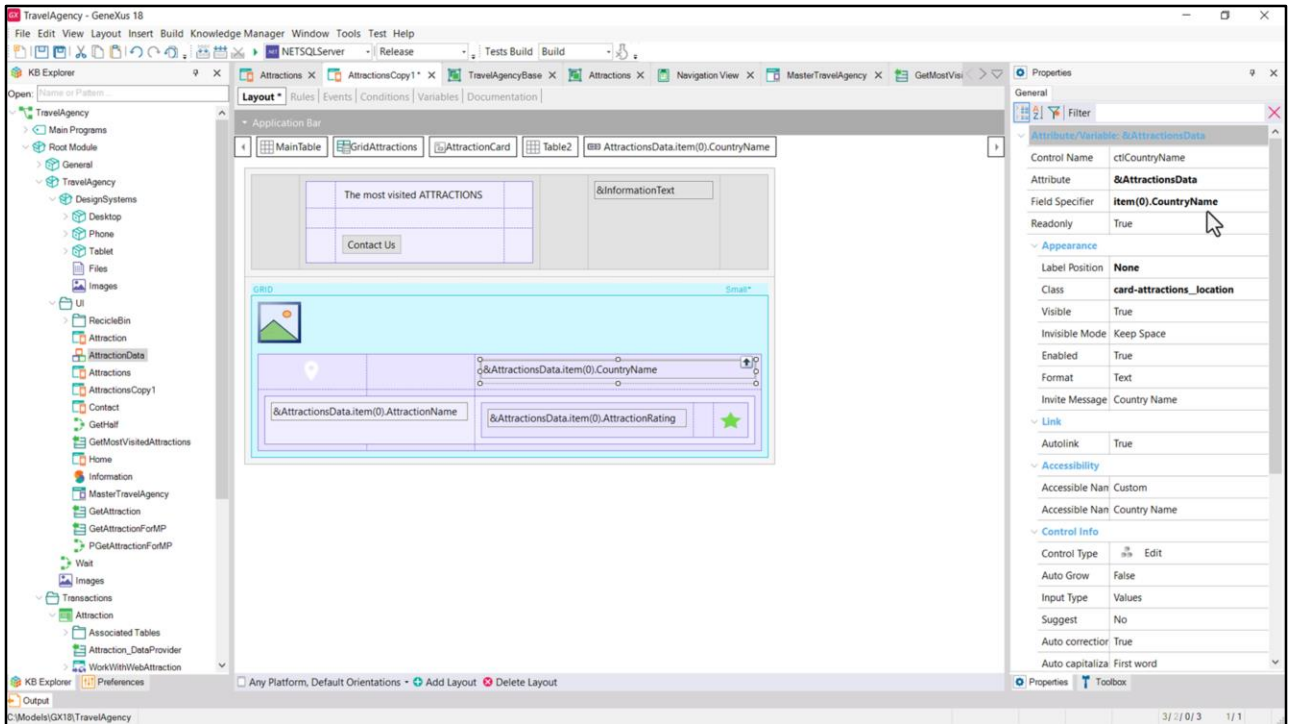


OK, let's pick up now where we left off in the previous video.

Since I didn't show you, you may be wondering how I inserted all these fields for each item in the collection.

Actually, it was very simple: when I went to create the grid –I will do it with another one– and I chose the variable collection SDT, it automatically asks which of the elements I want to insert in the layout. See what happens if I choose these, for example.

There we see that it is the same as the grid above. I'm going to delete this one.



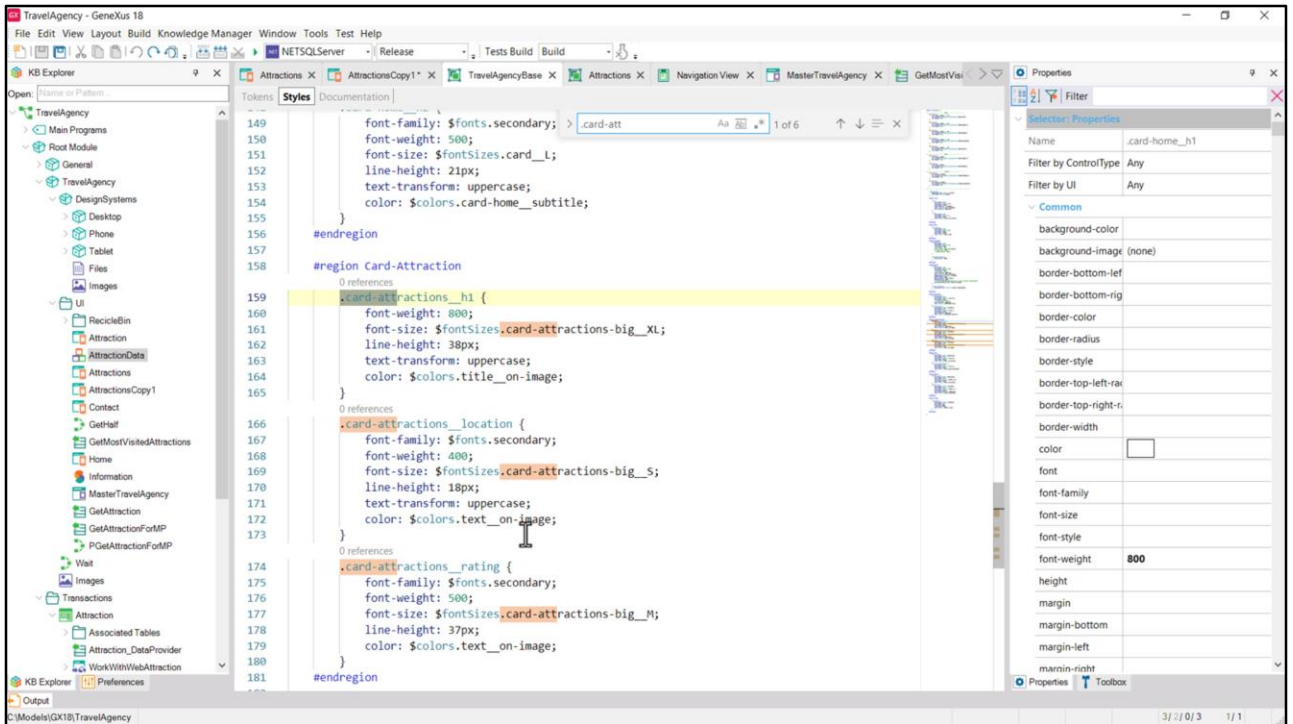
And if I select one of the elements, we can see that it is identified in this way.

Note that I set the Label position to None, so that the label of the variable, which of course is readonly, does not appear.

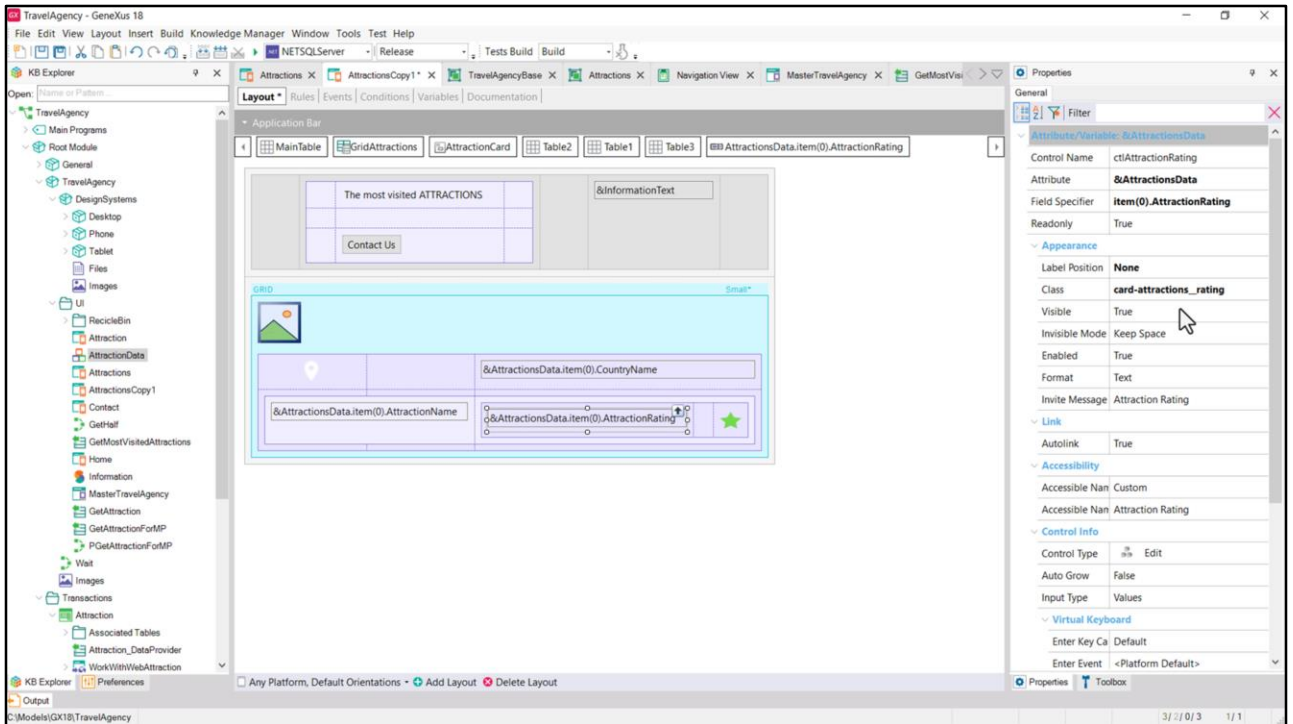
The screenshot displays a design tool interface with a spreadsheet titled "Tokens Travel Agency" open in a browser. The spreadsheet lists various UI elements and their corresponding typography classes. The columns include Name, Region, Class Name, Font Token, Weight, Font, Style, Size D, Size Tablet, and Size Phone. The spreadsheet is organized into rows for different UI elements, such as H1, H2, Paragraph, Button, Menu Label, Copyright, Card Home, Banner, Card Attraction, Form, and Place Holder. The spreadsheet is displayed in a browser window, and the design tool interface is visible in the background.

	A	B	C	D	E	F	G	H	I	J
1	Name	Region	Class Name	Font Token	Weight	Font	Style	Size D	Size Tablet	Size Phone
2	H1	Title	h1	primary	900	Heebo	Black	100	60	40
3	H2		h2	primary	700	Heebo	Bold	67	40	20
4	Paragraph	Paragraph	paragraph	primary	400	Heebo	Regular	16	14	12
5	Button	Button	button	primary	800	Heebo	ExtraBoli	14	14	12
6	Menu Label	Menu	menu_label	primary	500	Heebo	Medium	20	16	14
7	Copyright	Footer	copyright	secondary	400	Rubik	Regular	20	-	-
8	Card Home / H1	Card-Home	card-home_h1	primary	800	Heebo	ExtraBoli	42	20	15
9	Card Home / H2		card-home_h2	secondary	500	Rubik	Medium	23.5	-	-
10	Banner / H1	Banner	banner_h1	additional	600	Graphik	Semibold	36	-	-
11	Banner / H2		banner_h2	secondary	500	Rubik	Medium	20	-	-
12	Card Attraction / H1	Card-Attraction	card-attractions_h1	primary	800	Heebo	ExtraBoli	36	36	20
13			card-attractions-small_h1					36	20	12
14			card-attraction_h1					36	23	24
15	Card Attraction / Location		card-attractions_location	secondary	400	Rubik	Regular	14	14	12
16			card-attractions-small_location					14	12	10
17	Card Attraction / Rating		card-attractions_rating	secondary	500	Rubik	Medium	38	38	16
18			card-attractions-small_rating					38	16	12
19			card-attraction_rating					38	21	-
20	Form / Regular Text	Form	form_text	additional	400	Graphik	Regular	20	12	12
21	Form / Place Holder		form_text-placeholder	primary	400	Heebo	Regular	16	10	10
22										

And also let's see how I applied to all the texts the typography classes that we had entered some time ago, in the preparation stage, remember?

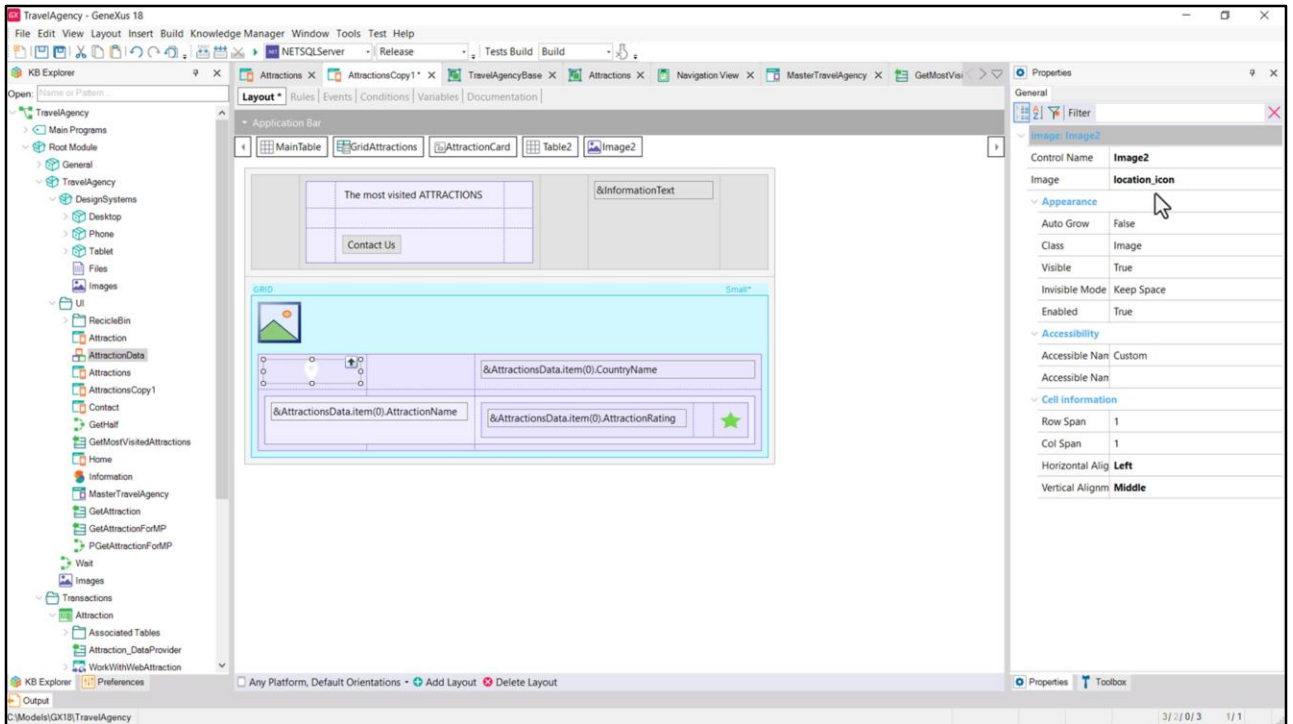


I filter by card-attraction... and in the Card Attraction region we see these three classes...

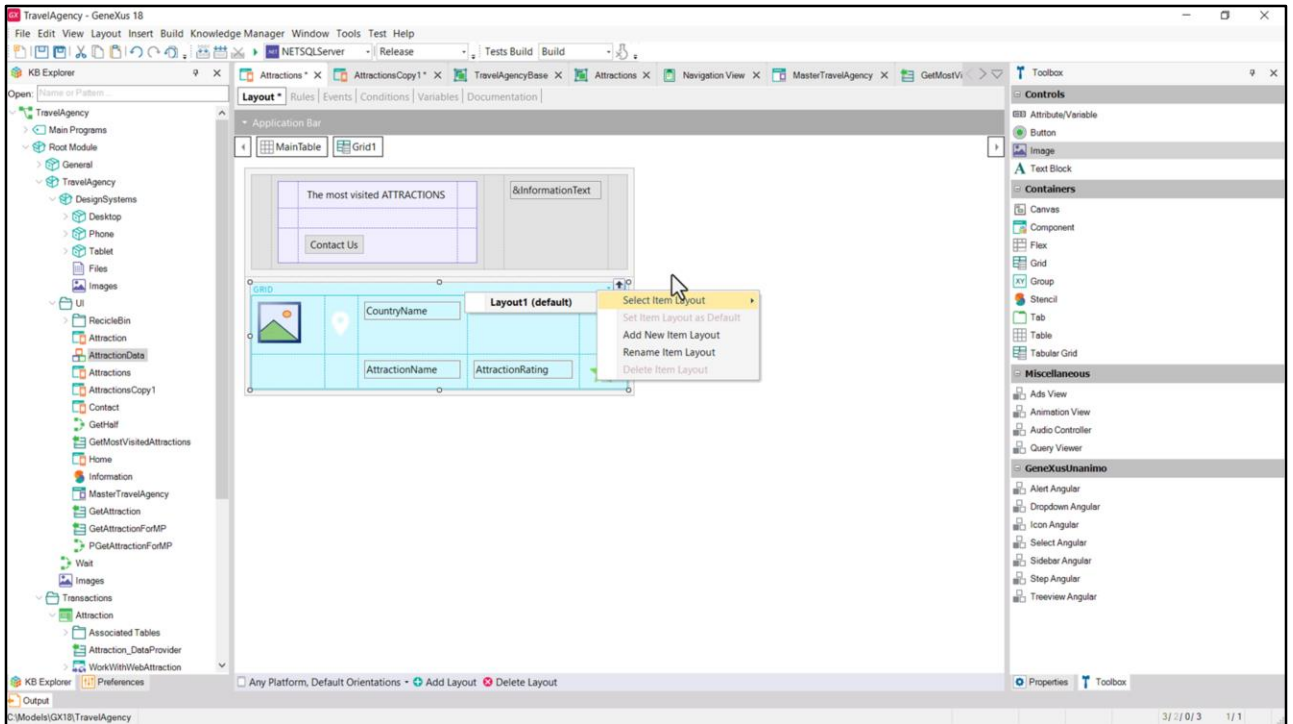


...which are precisely the ones we apply to these elements.

Here the rating... here h1.



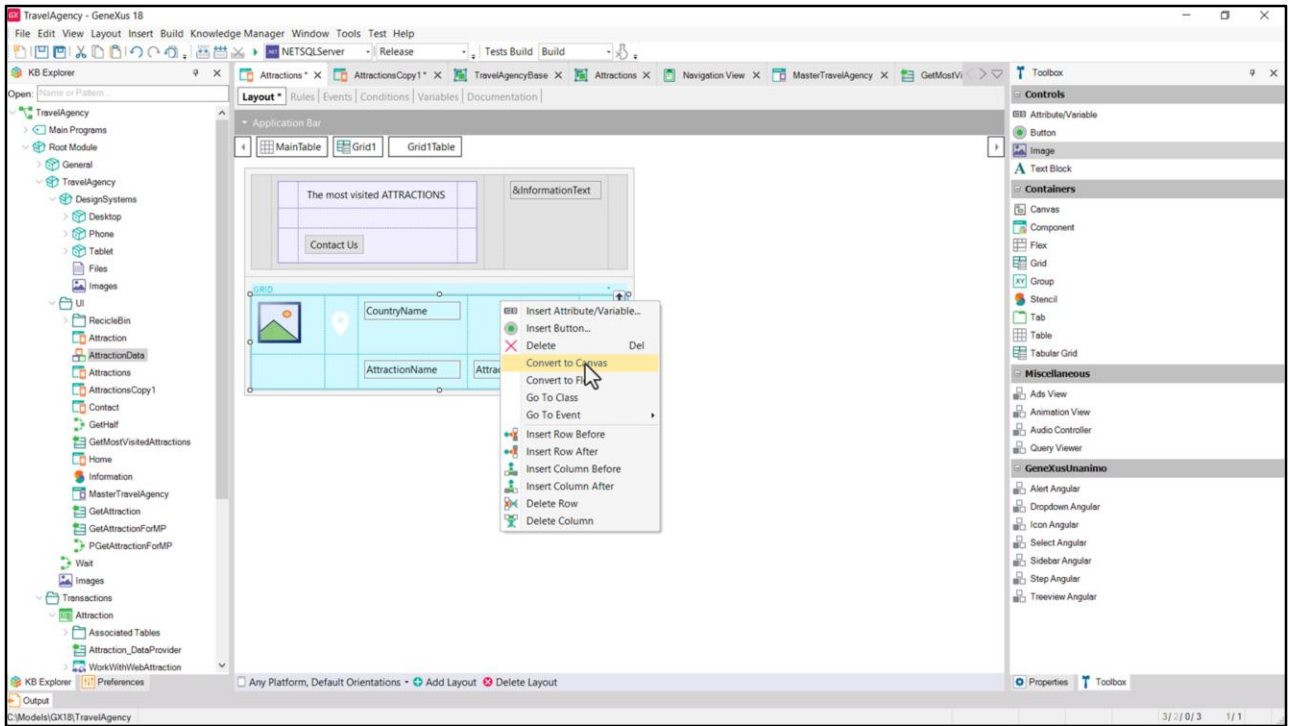
In addition, I had to download this image from Figma and enter it in the KB because I had missed it in the preparation stage.



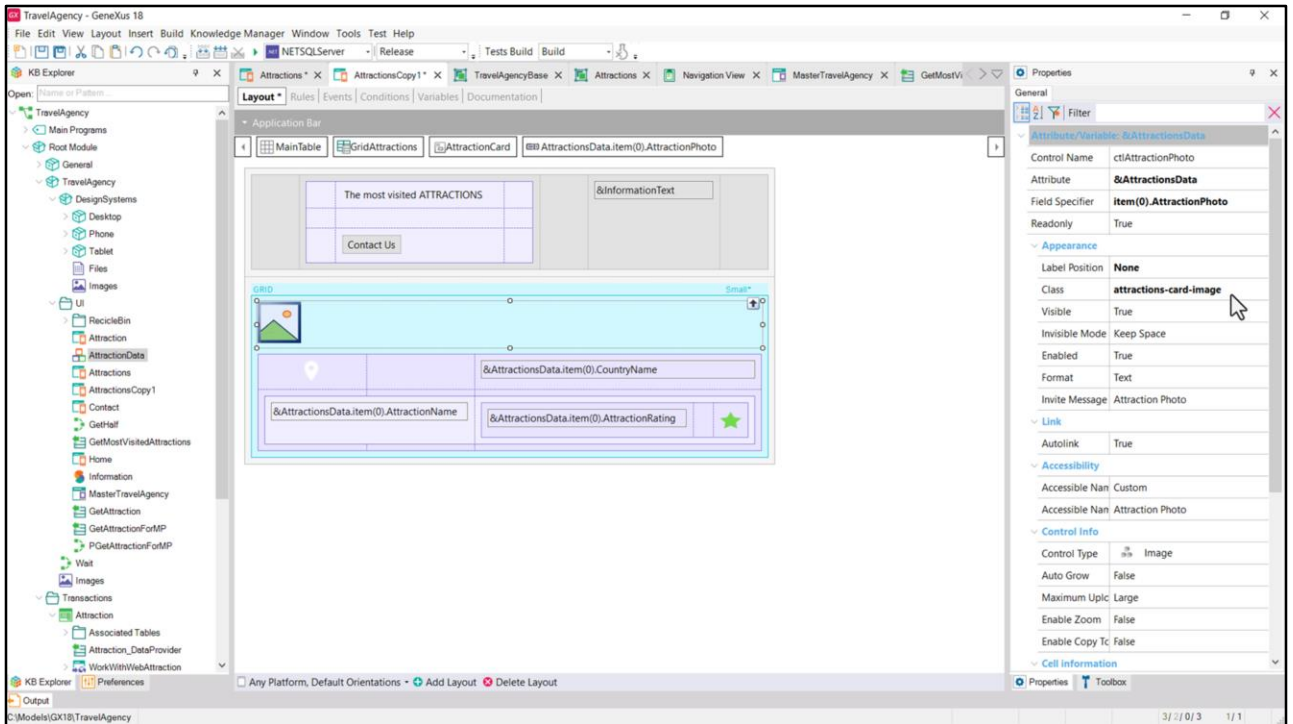
And what I did was to insert these two images.

We can do that in our other grid, the one that we want to implement with attributes instead of the SDT variable, to see it, but this is very simple.

So really the work that we have left to do here, at the layout level which in this grid at the moment is universal, is to place all these controls properly to be able to implement the card, where we're going to overlay controls...

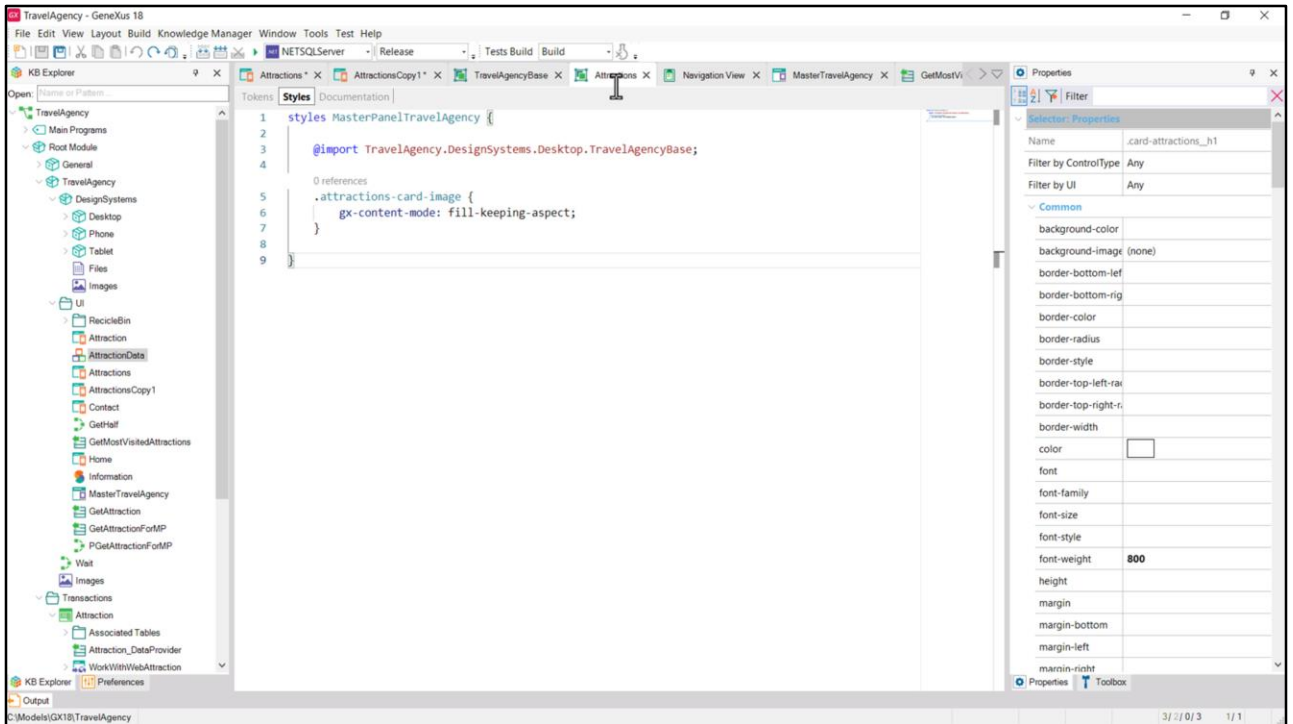


...so we already know that this table should actually be a canvas.

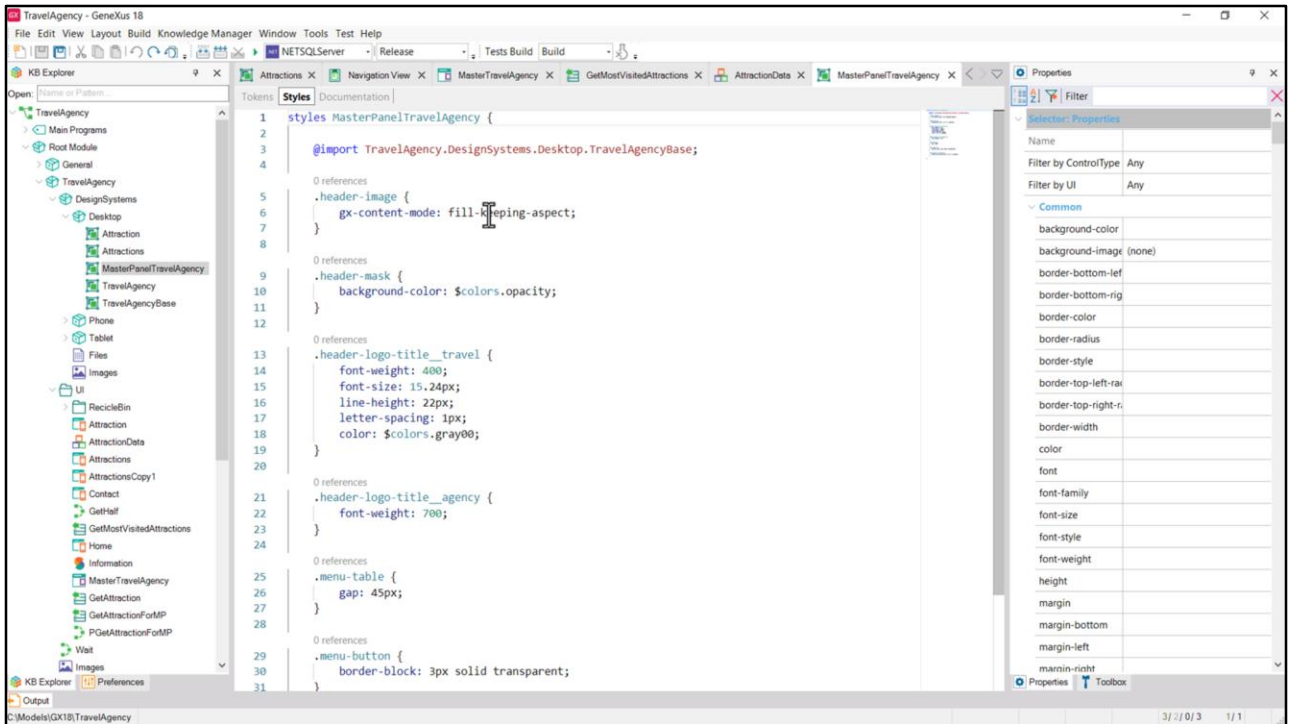


But see how I structured inside my other grid the internal elements of the canvas.

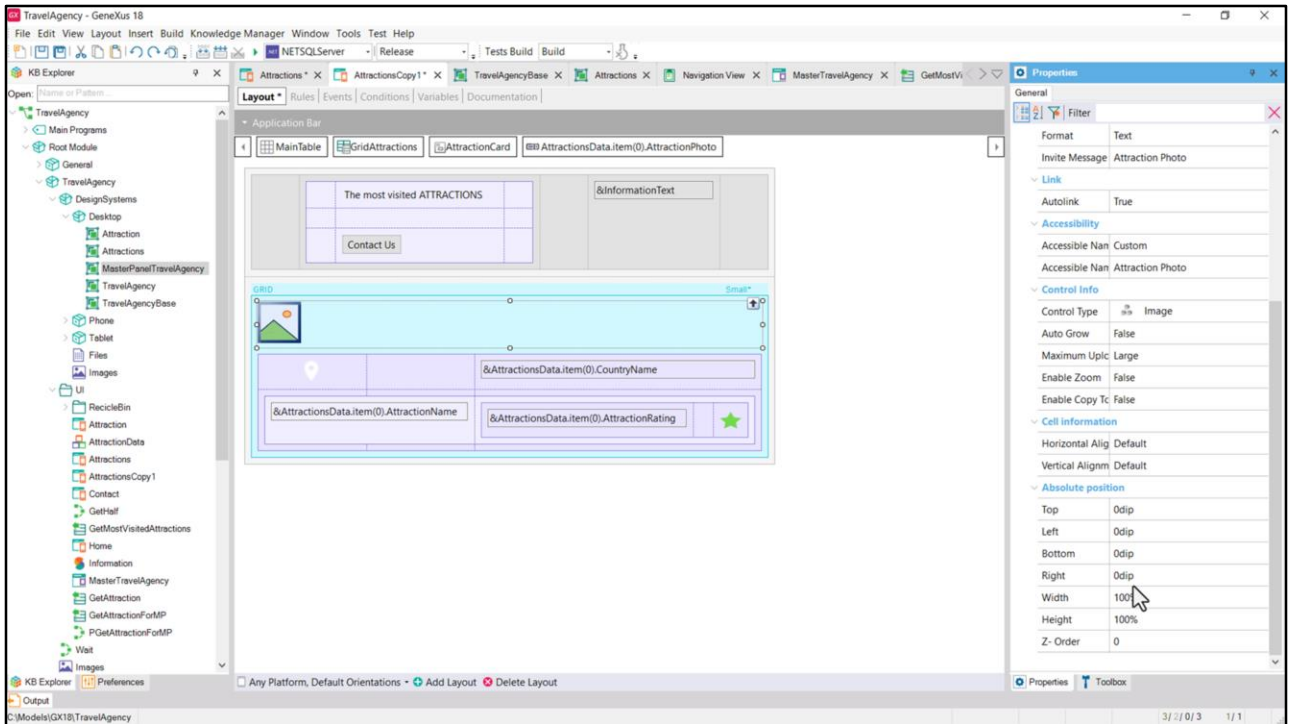
As for the loose image, note that it has this class that I especially created inside a specific DSO to design the specifics of this panel.



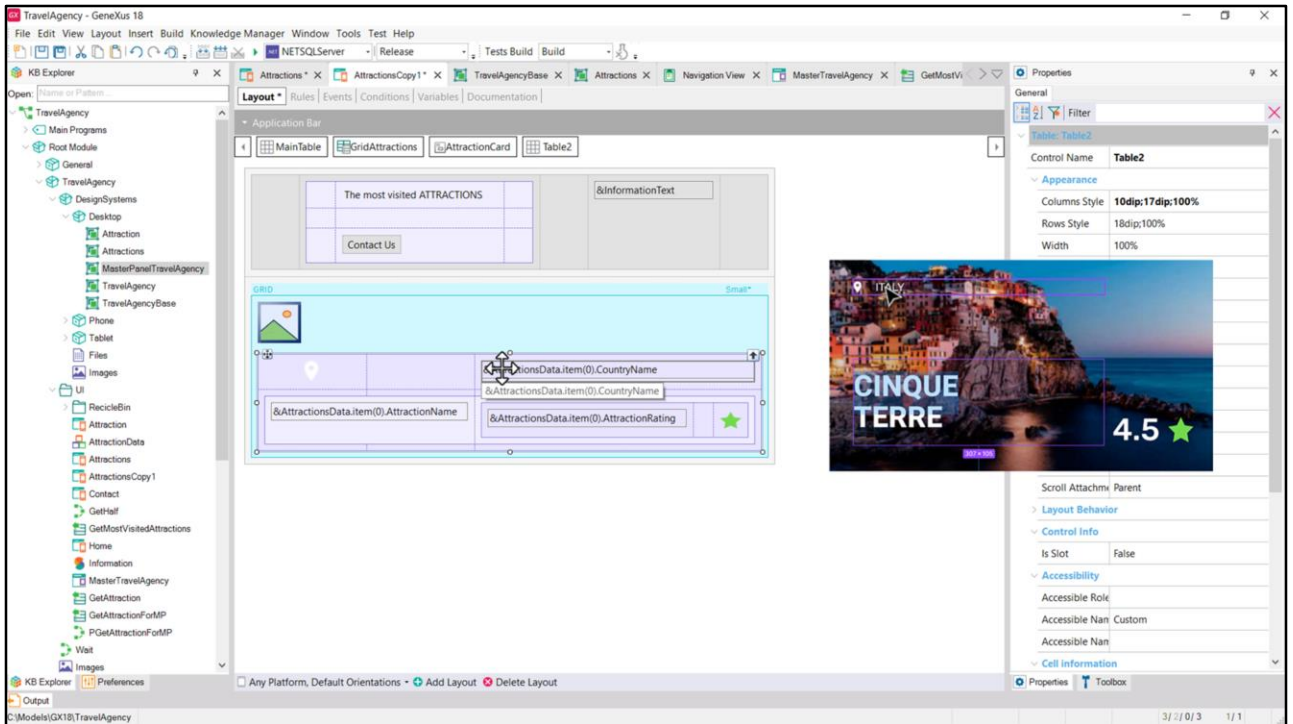
That's why I named it the same as the panel: Attractions. Here I have the class.



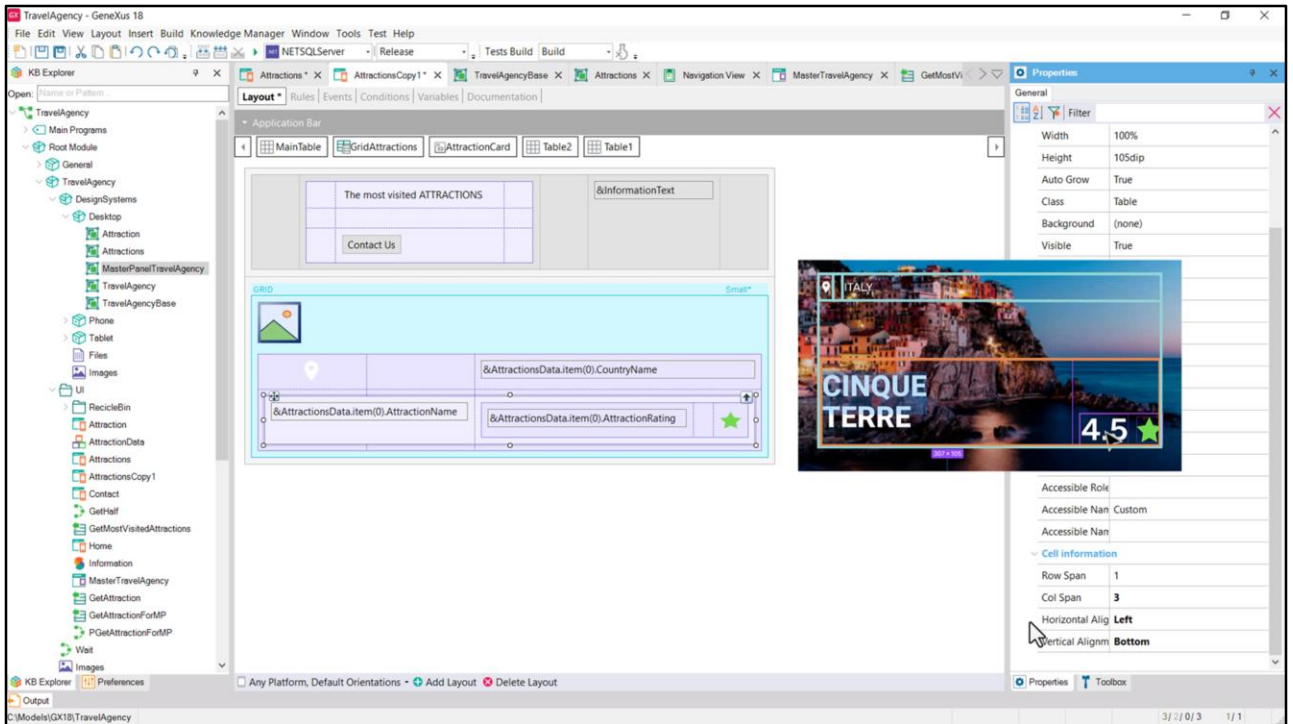
We did this before, remember? For the Header. But I didn't want to use its same class here, in case I need to differentiate them later.



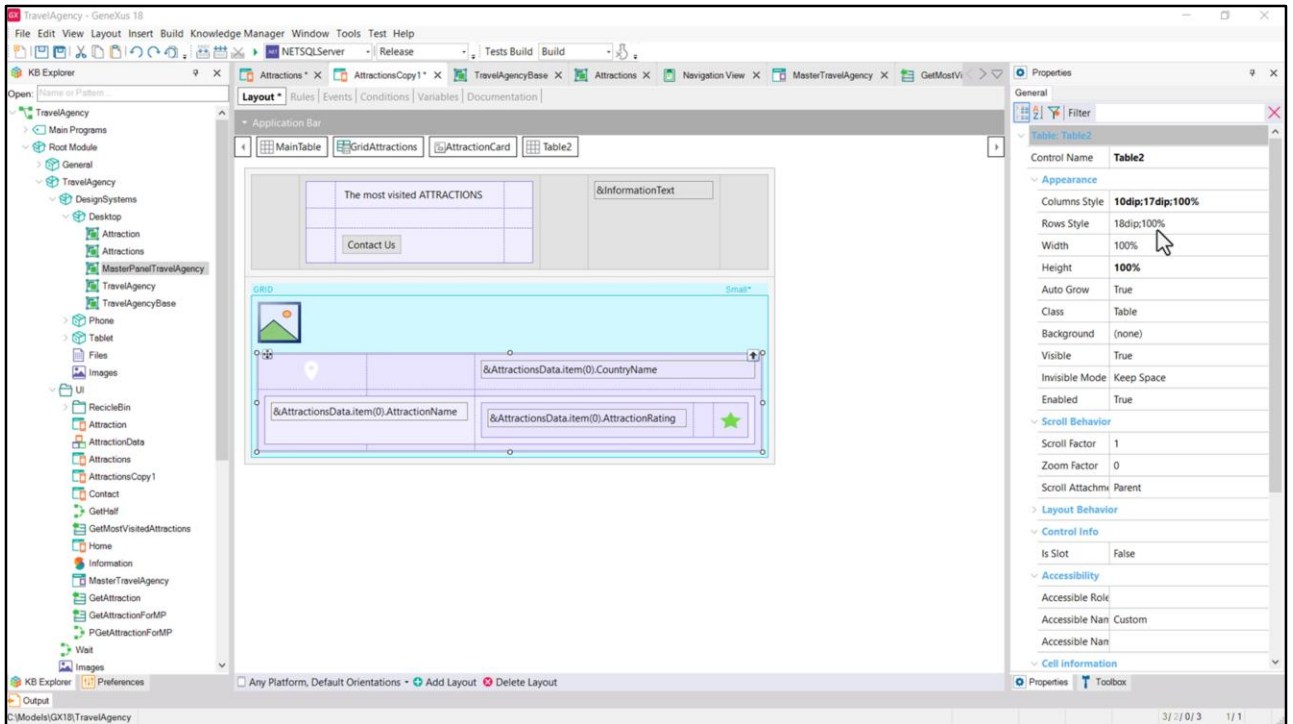
We must set its absolute positioning and, as we can see, it will occupy 100% of the width and height of the canvas, reaching the edges. And the deepest layer.



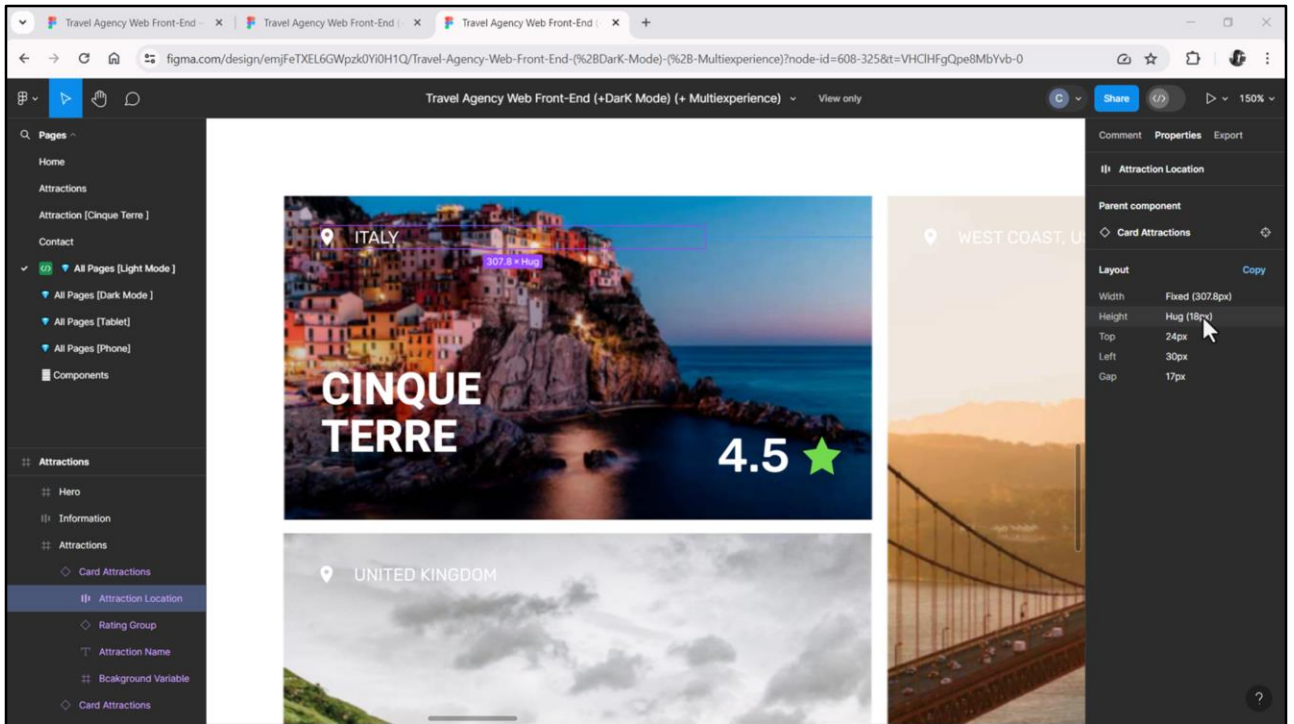
Next, we see that I placed all the other elements in another table, with two rows and 3 columns. In the first row I placed the icon, a space, and the name of the country...



And in the second row another table, which expands between the 3 columns of the containing table. It is aligned horizontally to the left, and vertically down, in relation to the cell that contains it, and which corresponds to the second row of this table.

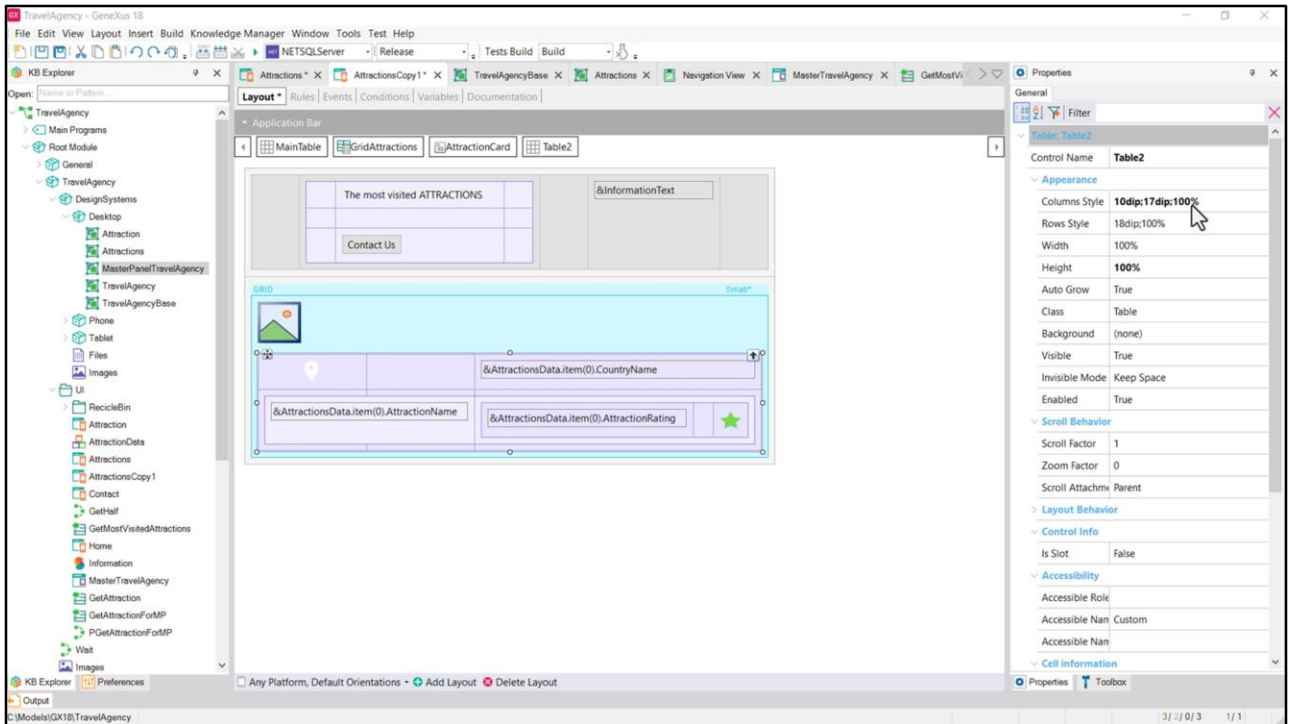


We can see that I gave it 100% height, because I entered 18 dips for the first row...

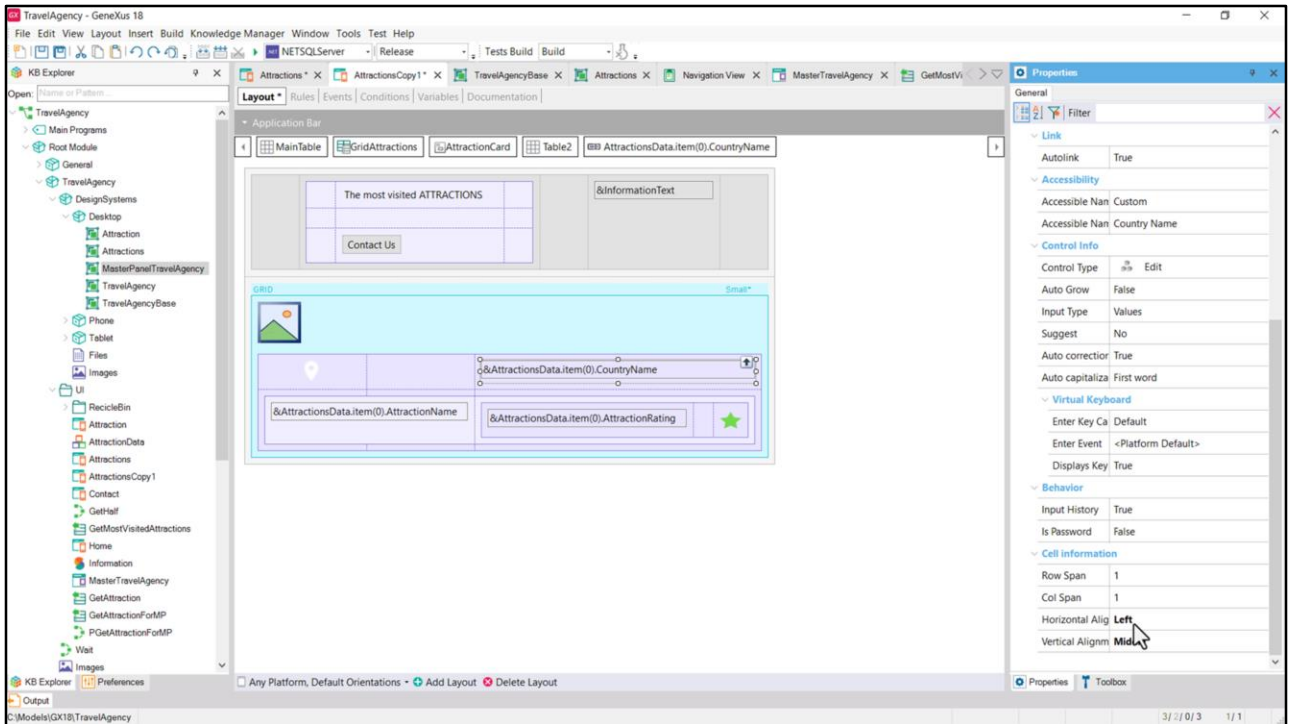


...that I extracted from here.

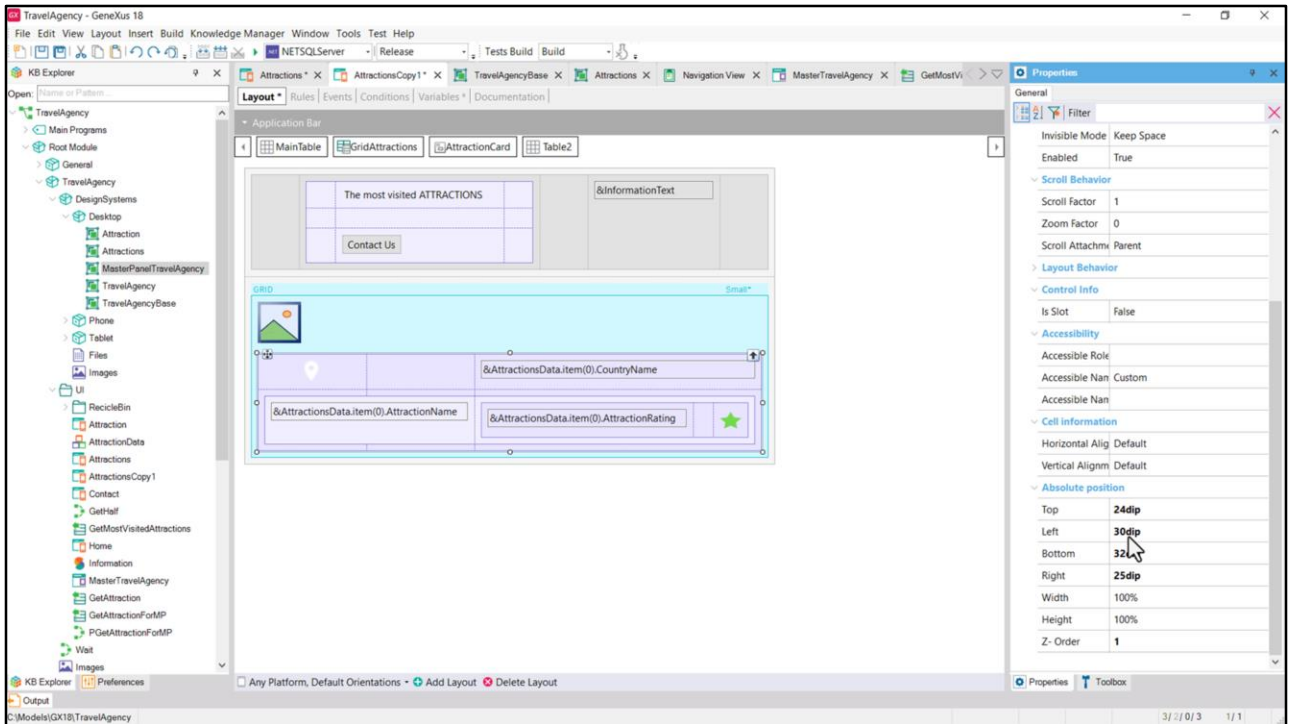
And let's see these 24 dips at the top of the canvas, these 30 on the left and this gap of 17 dips between the icon, of almost 10 dips wide, and the text ITALY. And that they are centered vertically, as we can also see.



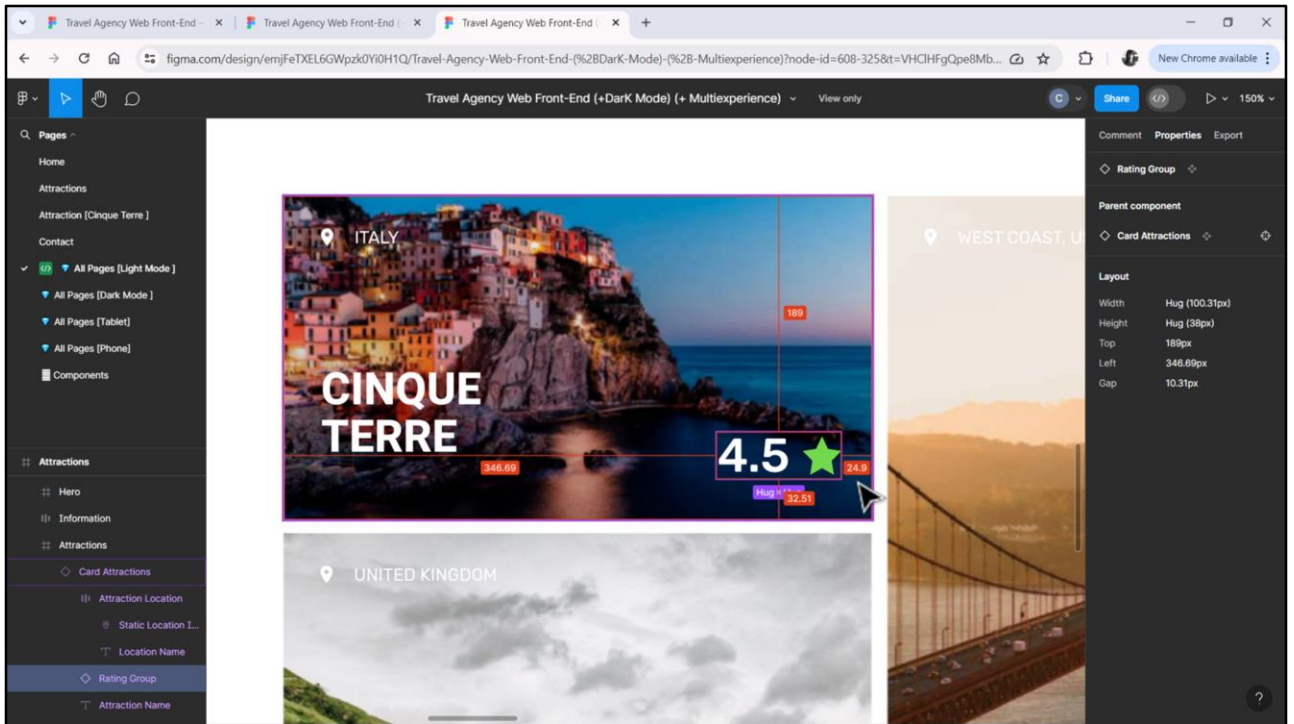
So I left 10 dips for the icon column, 17 for space, and the third column to expand to the remaining 100%.



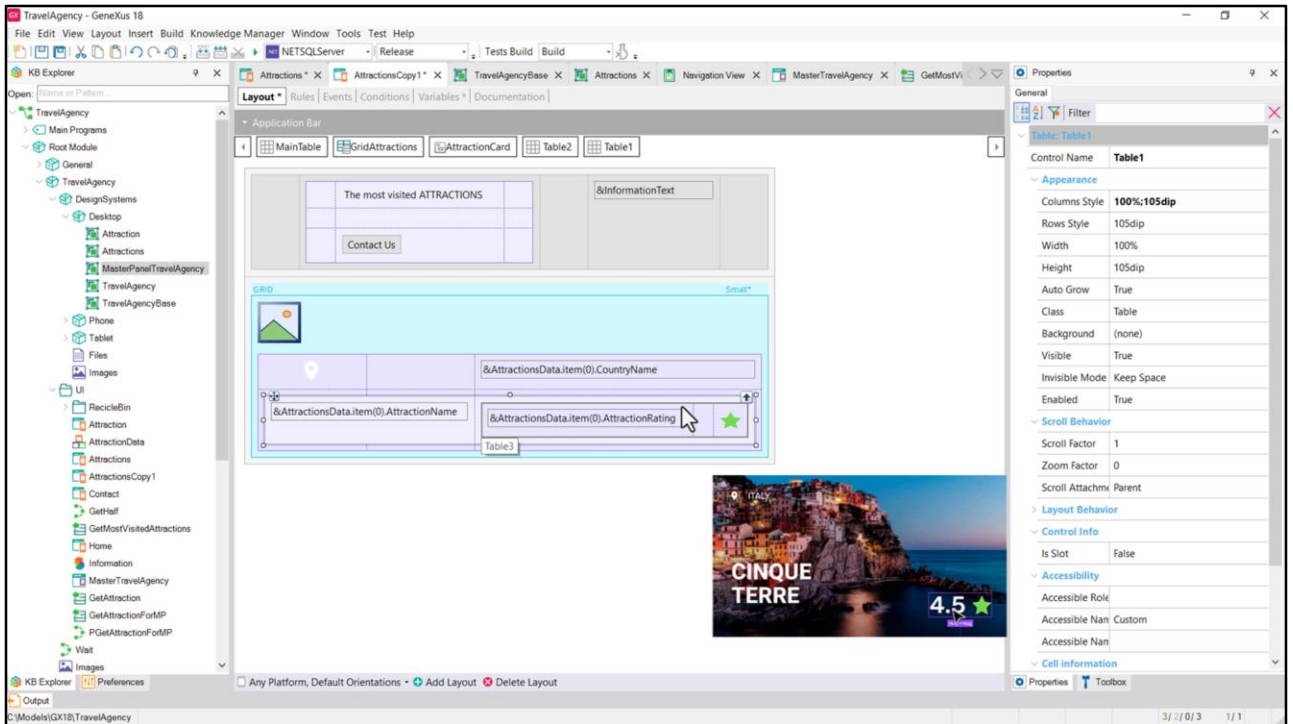
But with the condition that this variable is horizontally aligned to the left.
And both controls, vertically, in the middle.



The table is inside the canvas, so it was placed relative to its borders... We just saw that it started at 24 dips from the top and 30 from the left. And let's see where these 32 from the bottom and these 25 from the right come from.

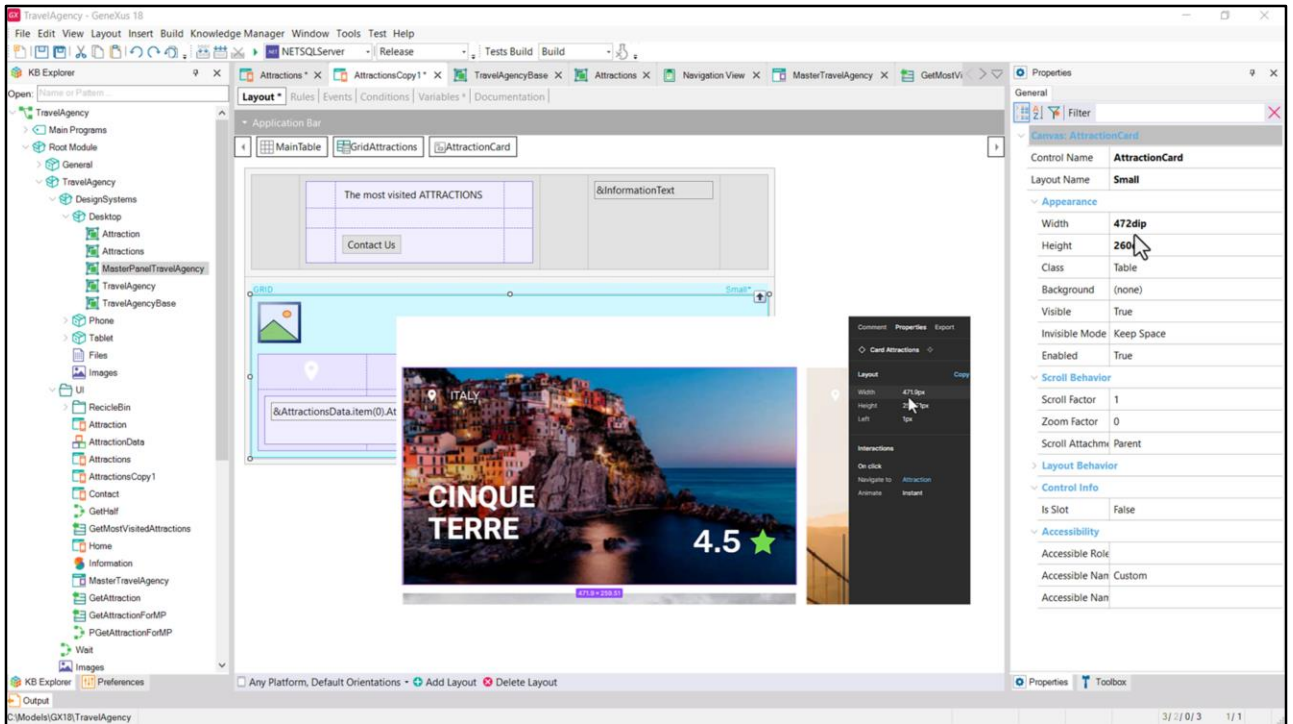


We see them there. We round them up.



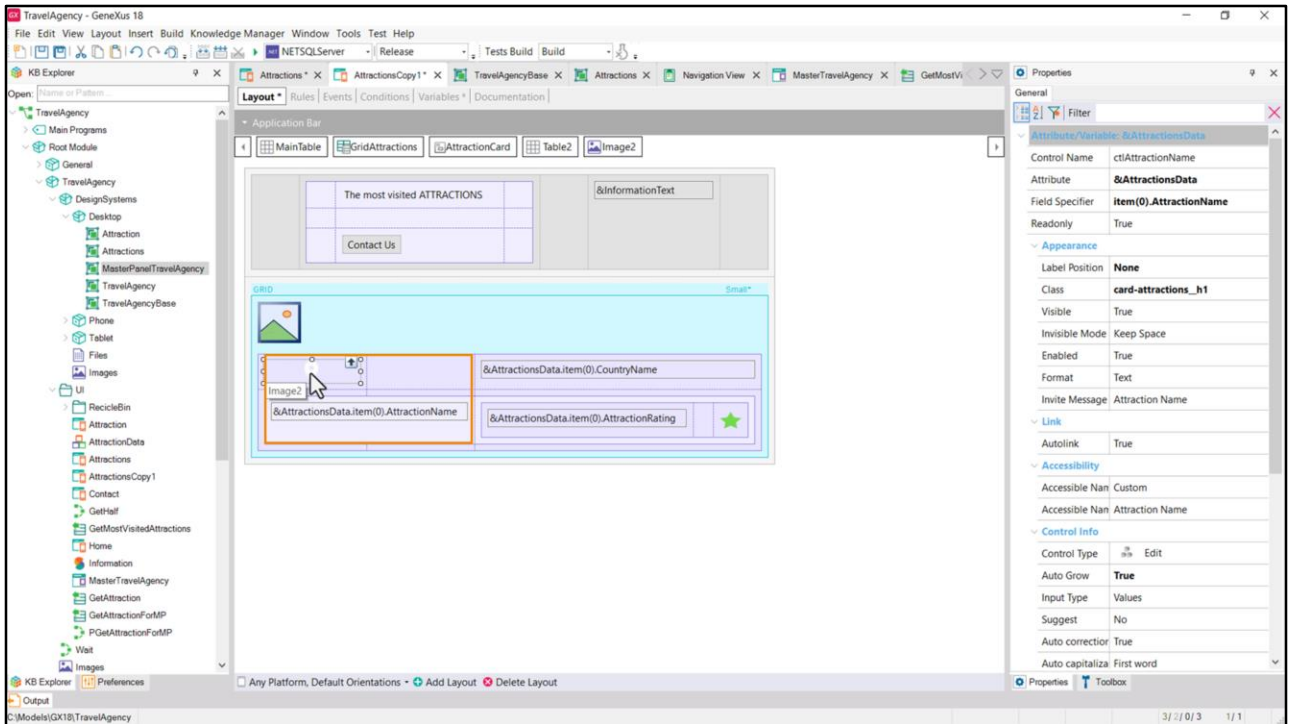
Good. We set the table with Z order 1, so that it is above the image.

And now let's analyze this sub table. It has 2 columns, the one on the right of 105 dips, which is the maximum space that can occupy the width of this other table; and the one on the left, which will contain this variable, which has a space of 100% of the remaining width of this table to occupy.



And what is the width of this table? 100% of its container, which is the entire row 2; since it adds up the 3 columns because it expands in the 3 columns, it is clearly 100% of the width of the table...

What is it, then? The one that results from subtracting, from the width of the canvas... the Left and Right borders.

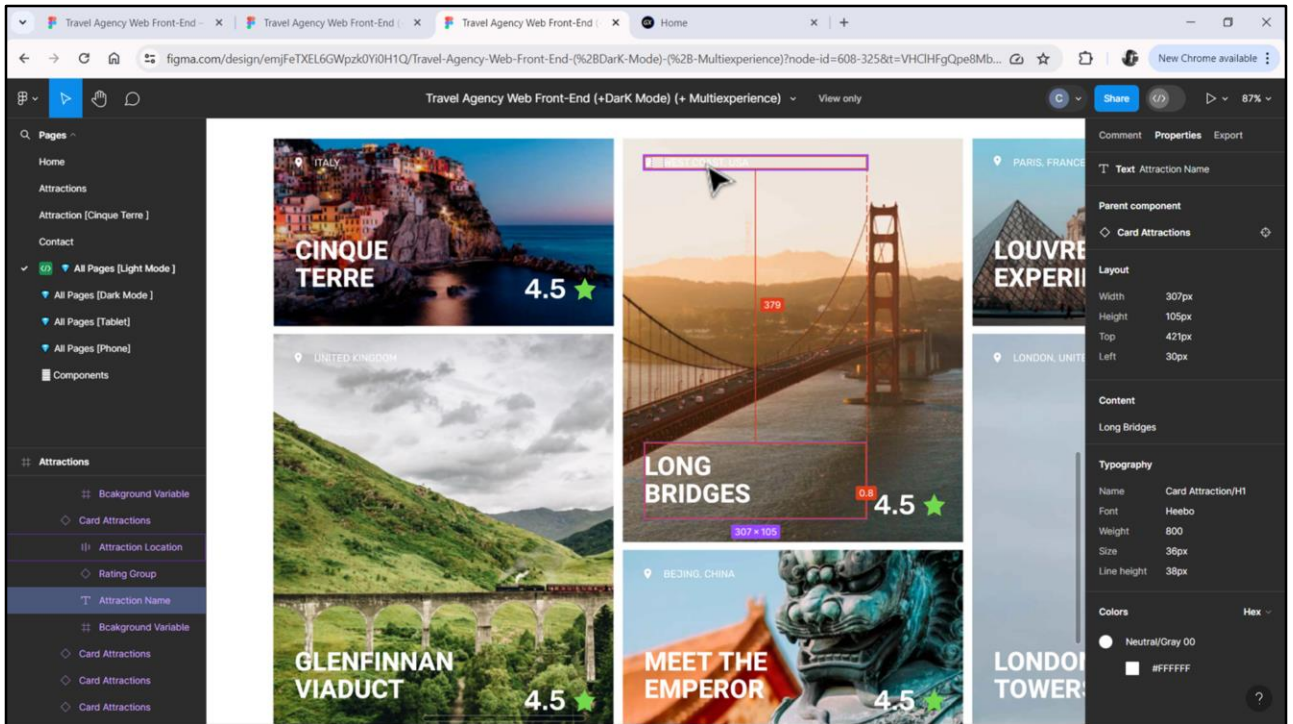


I could continue analyzing each value that I gave to each property, but as it is more of the same and I don't want to bore you, let's leave it here. You can investigate all this in detail in the xpx file that will be available.

As I have been repeating from the beginning, there is almost never only one way to implement things. The advantage of having placed this and this control in a table, is that I model the alignment to the left in an optimal way. Imagine I need to change the distance from the left border of the Canvas, for example. I do it only once, for the table. If I have these controls either individually or in separate tables, I will have to make the change for each one.

The same goes for controls that we know must be aligned horizontally in some way, such as these.

When there is an obvious structure in the design that interrelates the controls, then it is convenient to use tables (in the appropriate varieties, such as flex for some cases, of course).

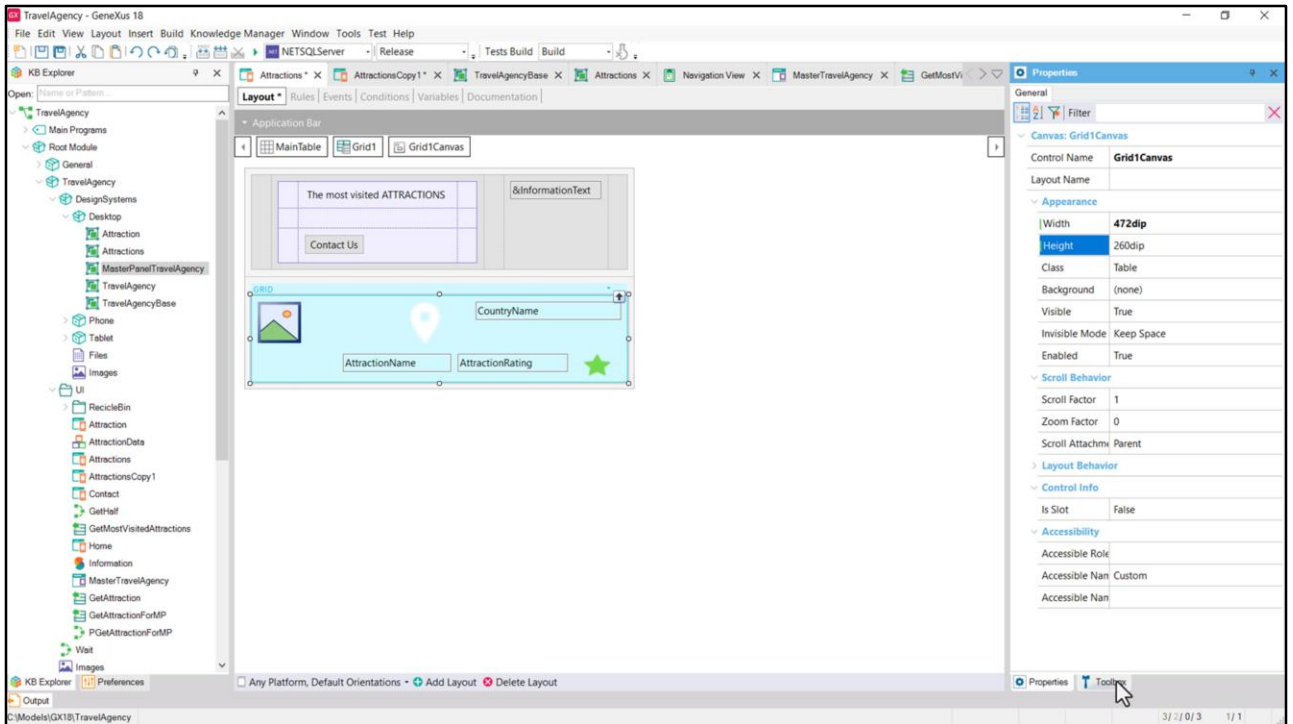


Now I want to tell you how I analyzed the differences between the small cards and the large cards.

We knew that one was 260 dips high and the other was 560 dips high. The difference of 300 dips is given only by this vertical space.

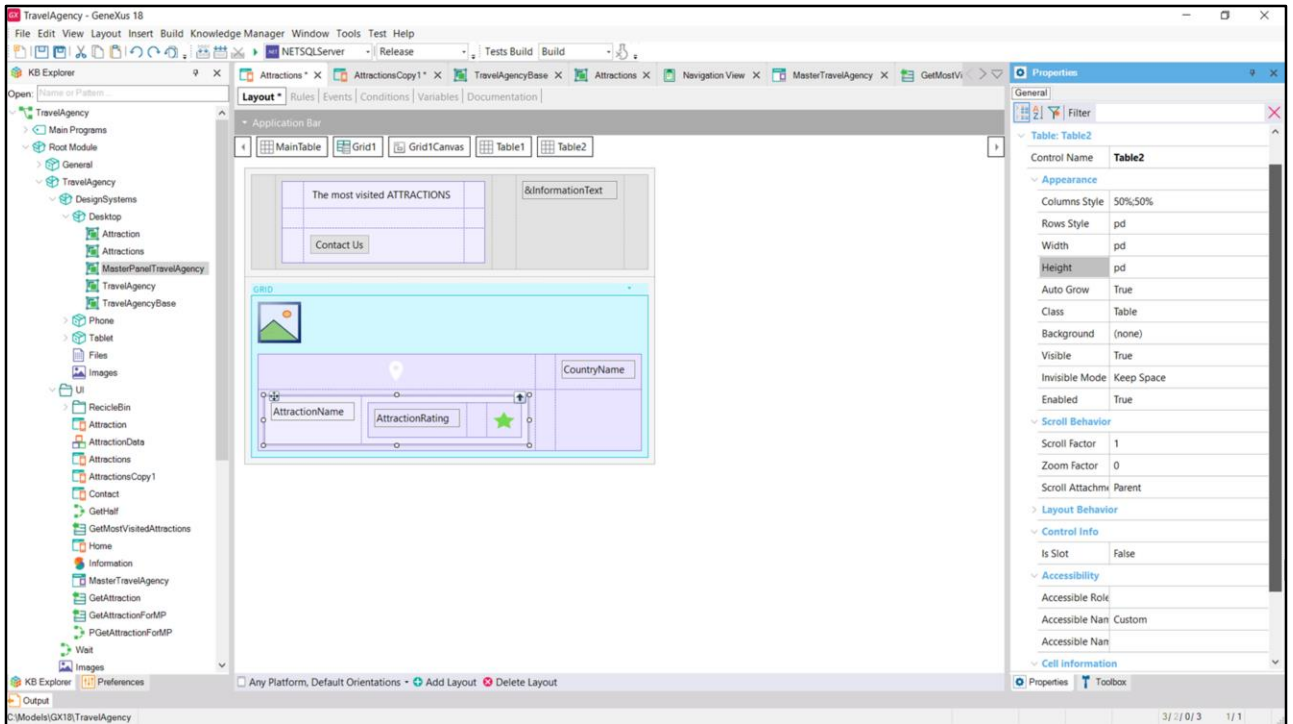
That is, to convert a large card into a small one, all that is needed is to remove this space in the middle of 300 dips.

Note that the distance between this element and this one is 80 dips here, while here it is almost 380. That is, 300 is the difference between one and the other.



So, I could focus first on modeling the Small card as if it were the default one. And when I finished it, I implemented the Large one. And we could do the same, very quickly, with our grid with attributes.

Here I set the dimensions of the canvas.

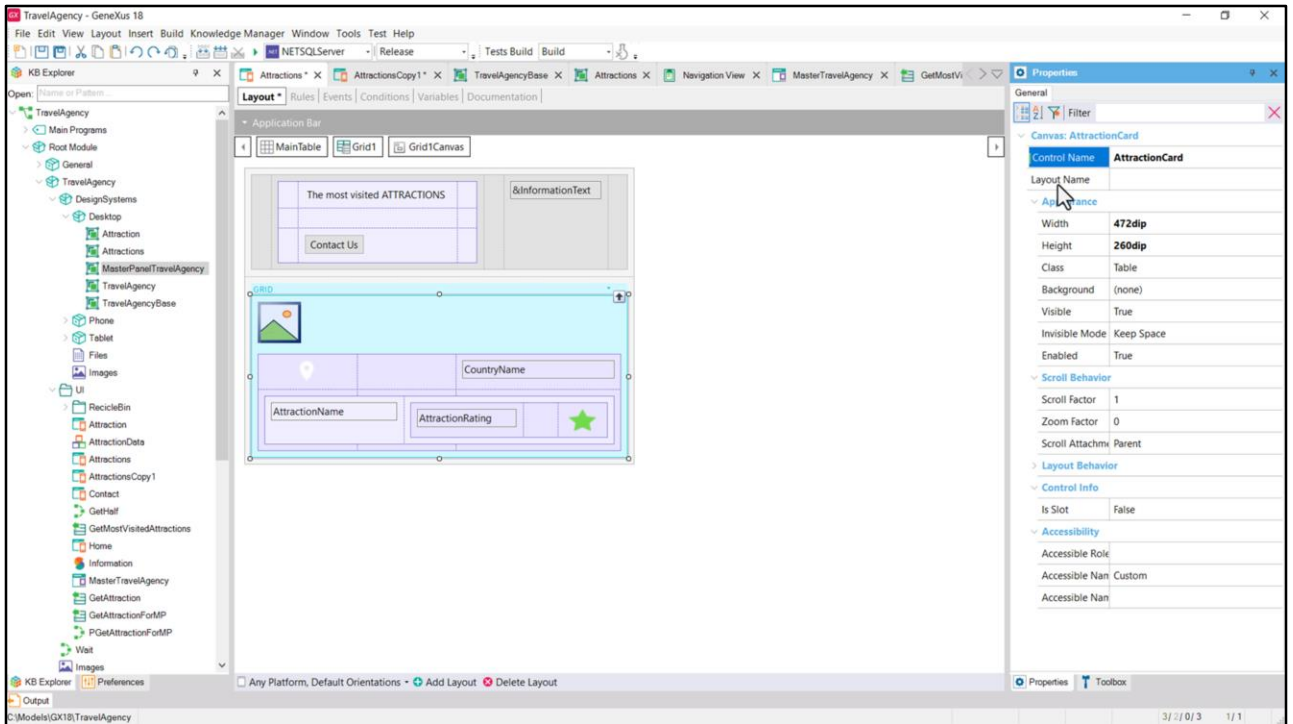


And then I start to model the table controls, to place our image and attribute controls inside the tables that we had identified.

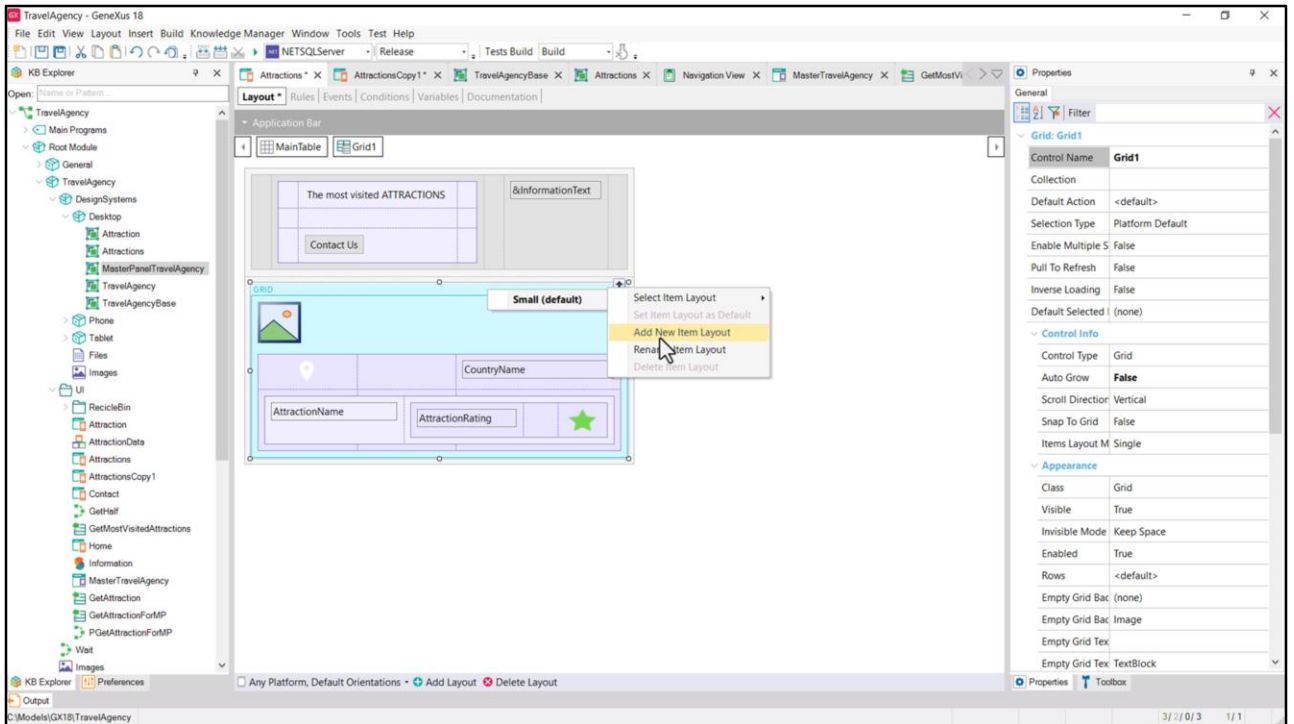
Finally I set this as the second row of the main table, and I make it expand in the 3 columns.

Well, and the rest, basically, is to copy the properties that we had in AttractionsCopy to this other one.

I start to do it quickly but I leave it as a task for you. Actually, it would have been convenient to copy the whole canvas and there replace the variables with attributes.

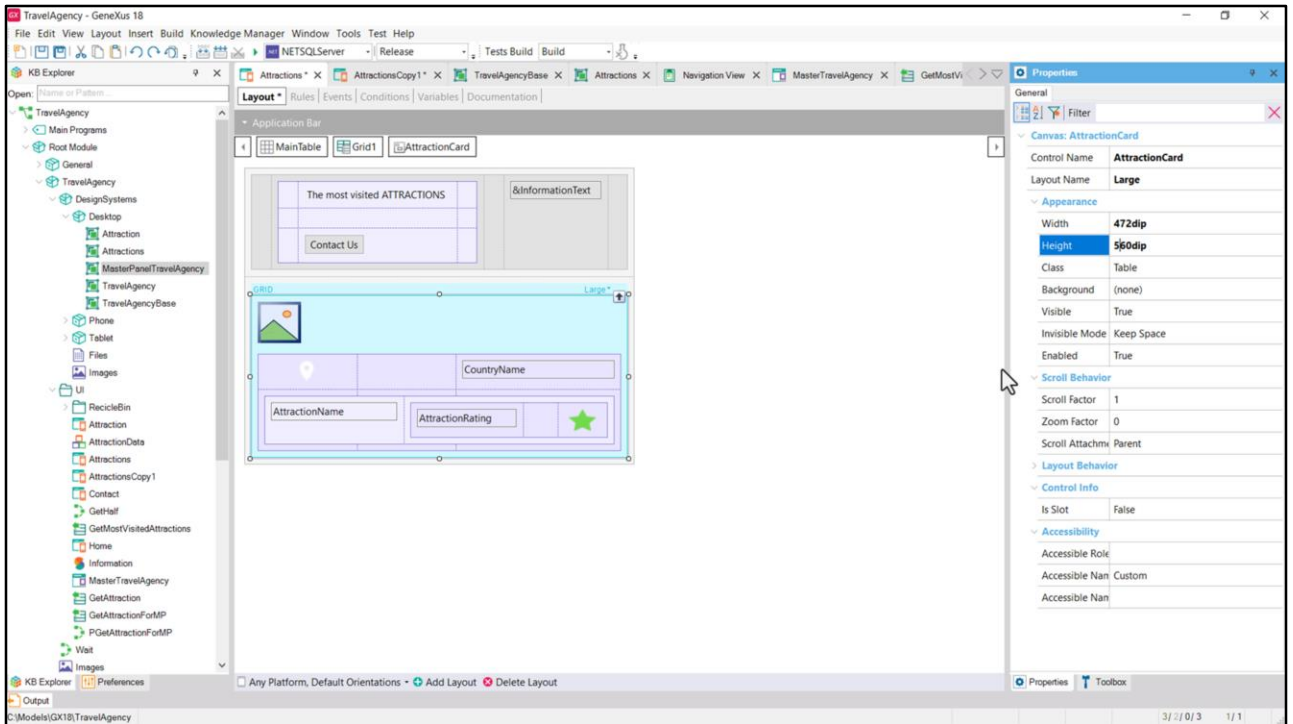


Here we have the small card ready. I'm going to rename the canvas to AttractionCard, as in the other grid.



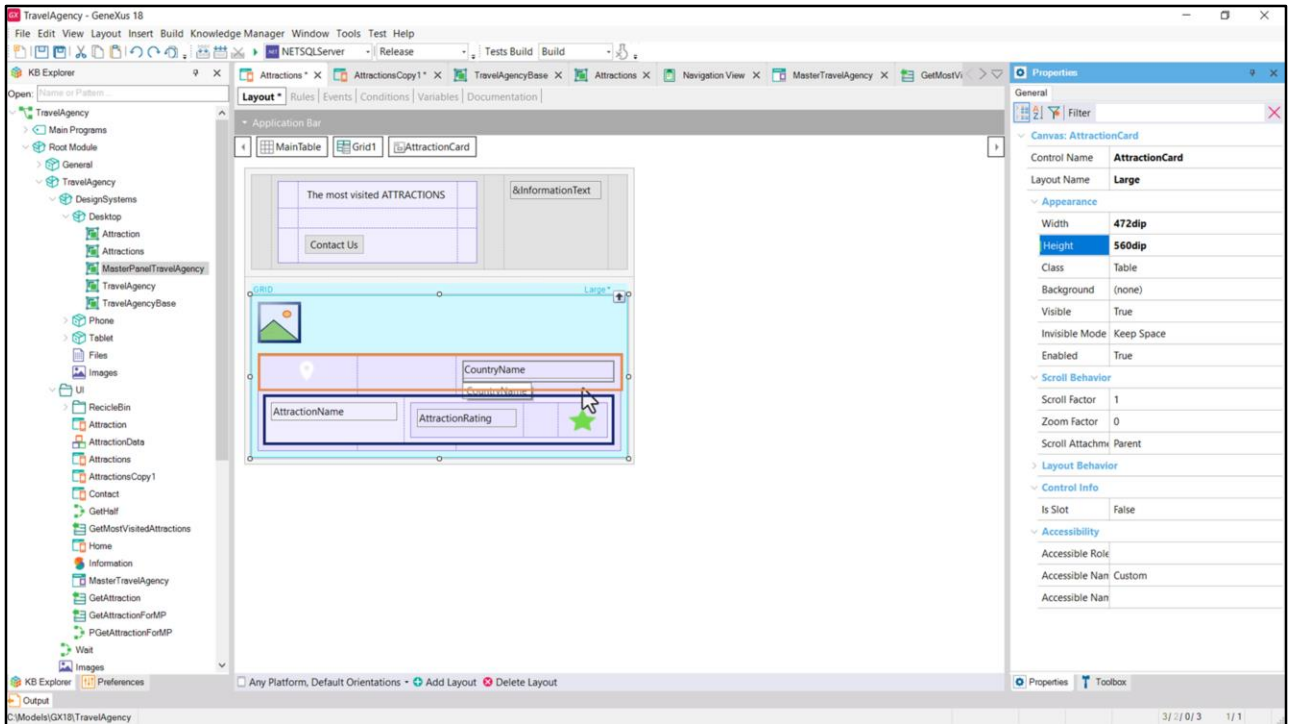
And I'm going to rename this item layout to Small. It will be the default.

And now I'm going to add another item layout, which I'll call Large...



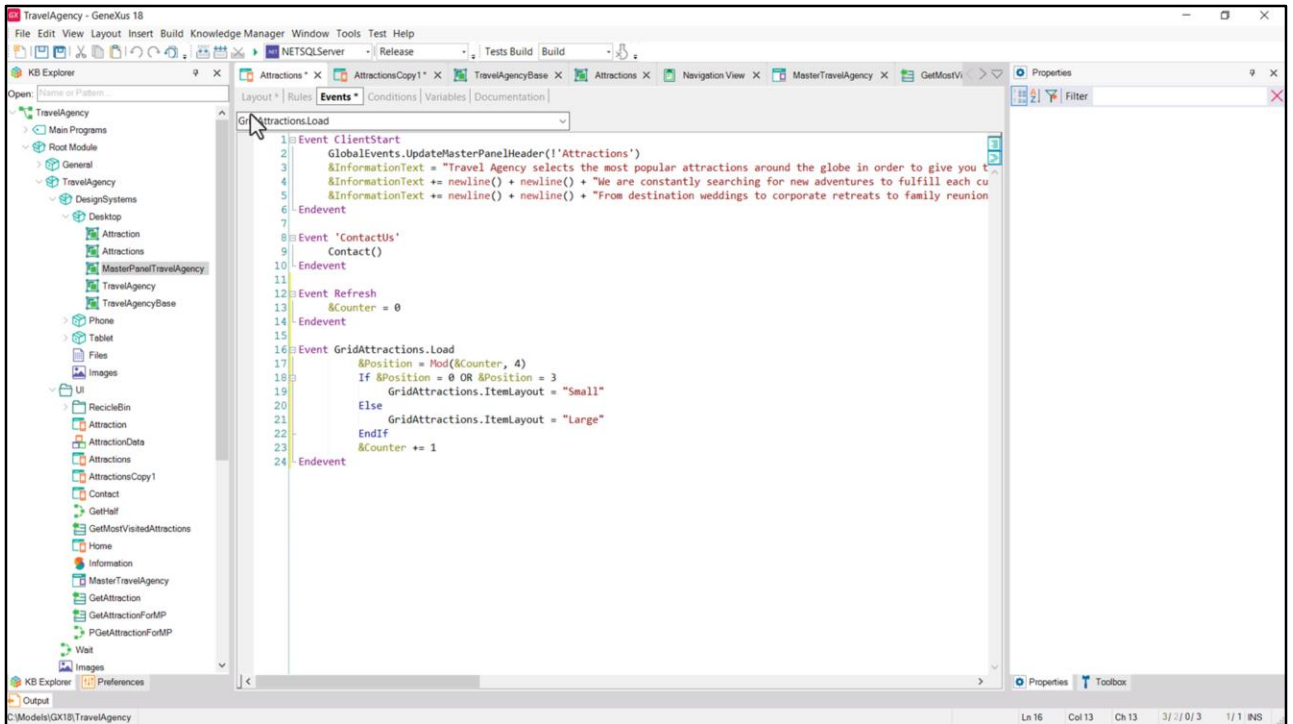
It is initialized with the layout of the only one that was there. So it will have exactly the same controls, with the same values for the properties.

As we already saw, the only difference between the Small and Large layout will be their Height... here it will be 560 dips.



Let's analyze why just by doing this there will be 300 more dips between the row of this table and the table of row 2.

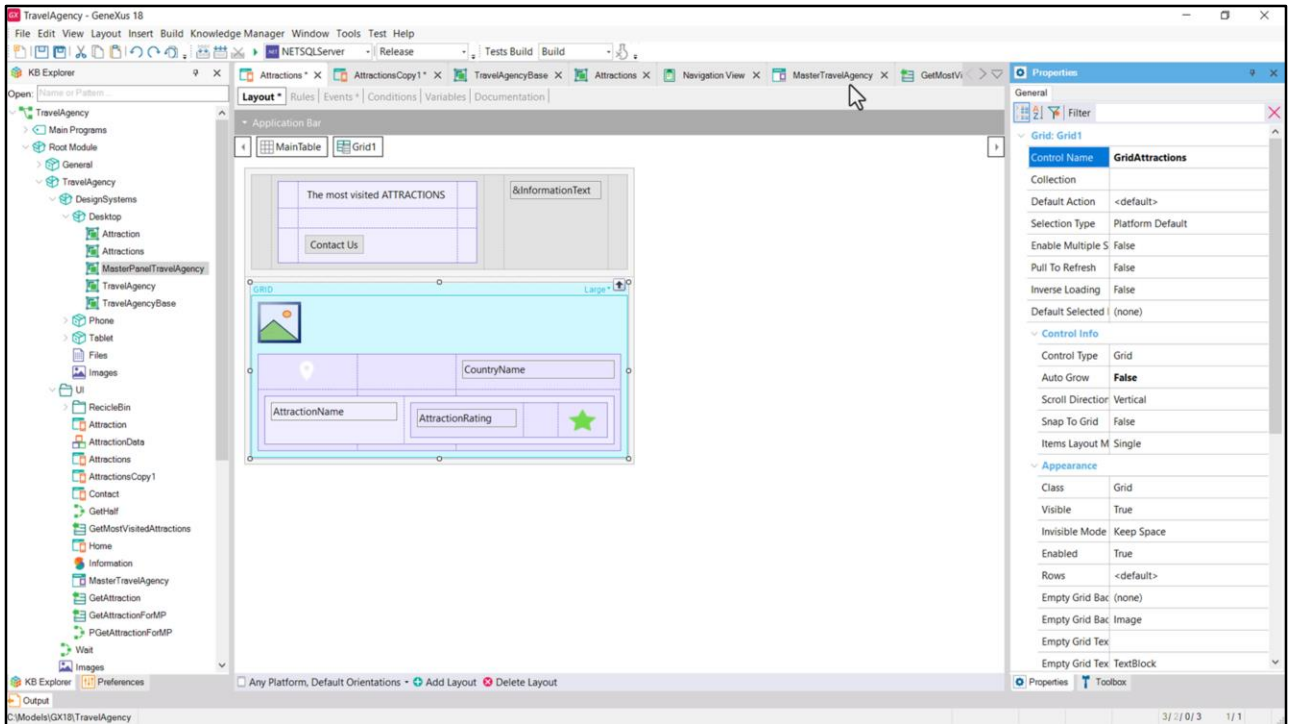
The borders of the containing table are set at these distances: top and bottom. The height is relative to the height of the canvas, which is what varies between the two layouts. But in addition, this table has a fixed height, and is aligned vertically down, so it will always be on the bottom edge. And therefore the space left to complete 100% of the height of the row where the table is located is the one that will cause the difference of 300 dips between one case and the other.



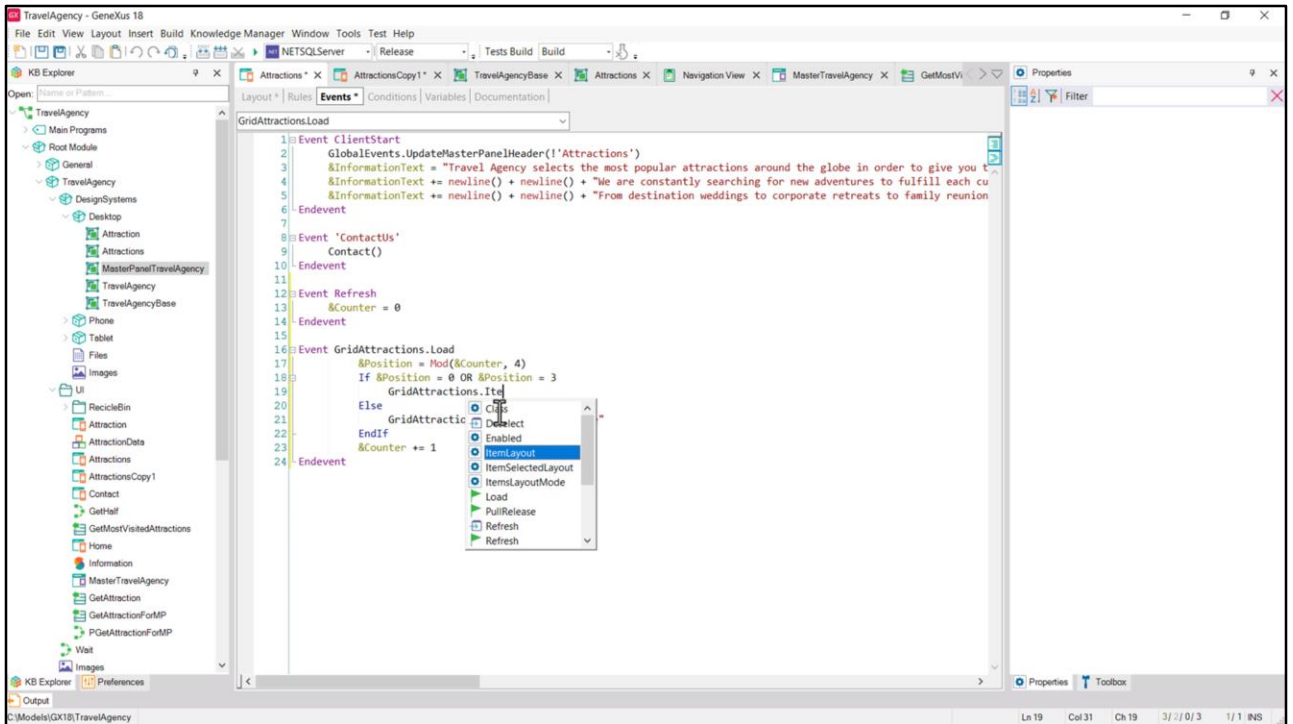
We still have to copy what we did here to load each item in the grid with the corresponding layout.

I copy both events...

I paste them... I remove this that doesn't go here. In the Refresh I only leave to set the counter to 0...

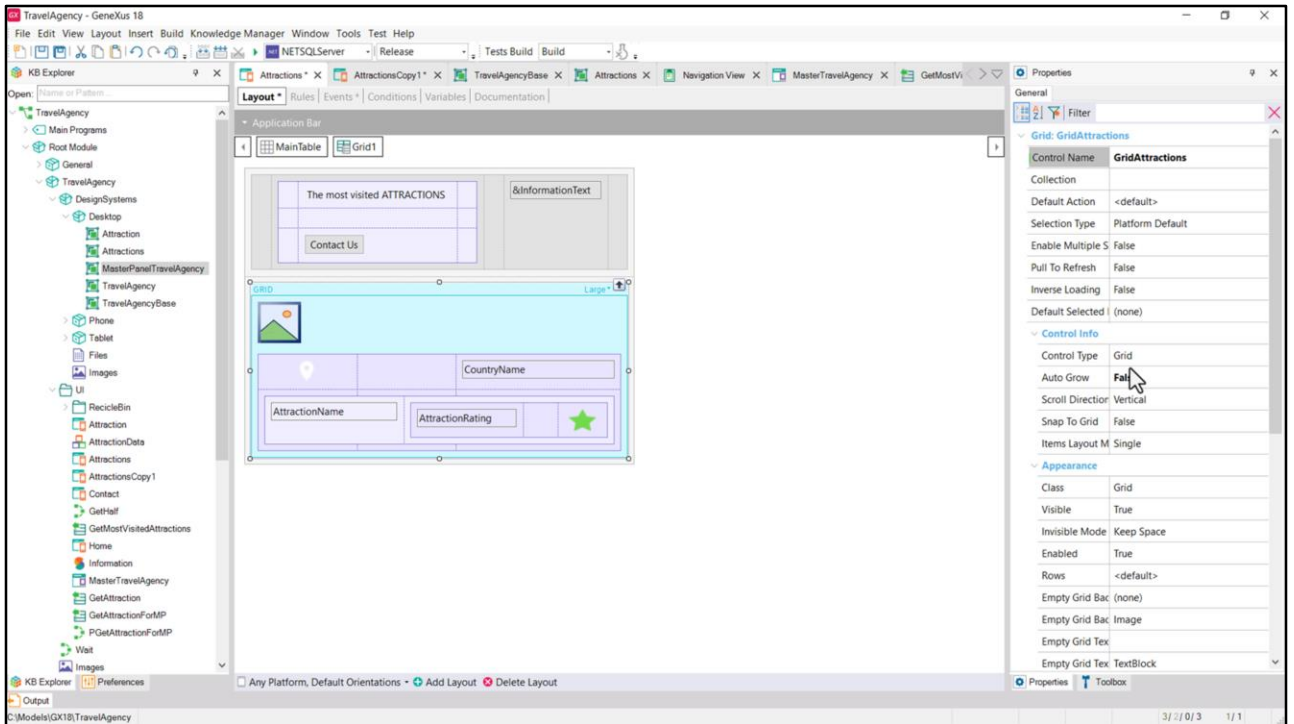


I change the name of the Grid to the one I have been using... GridAttractions.

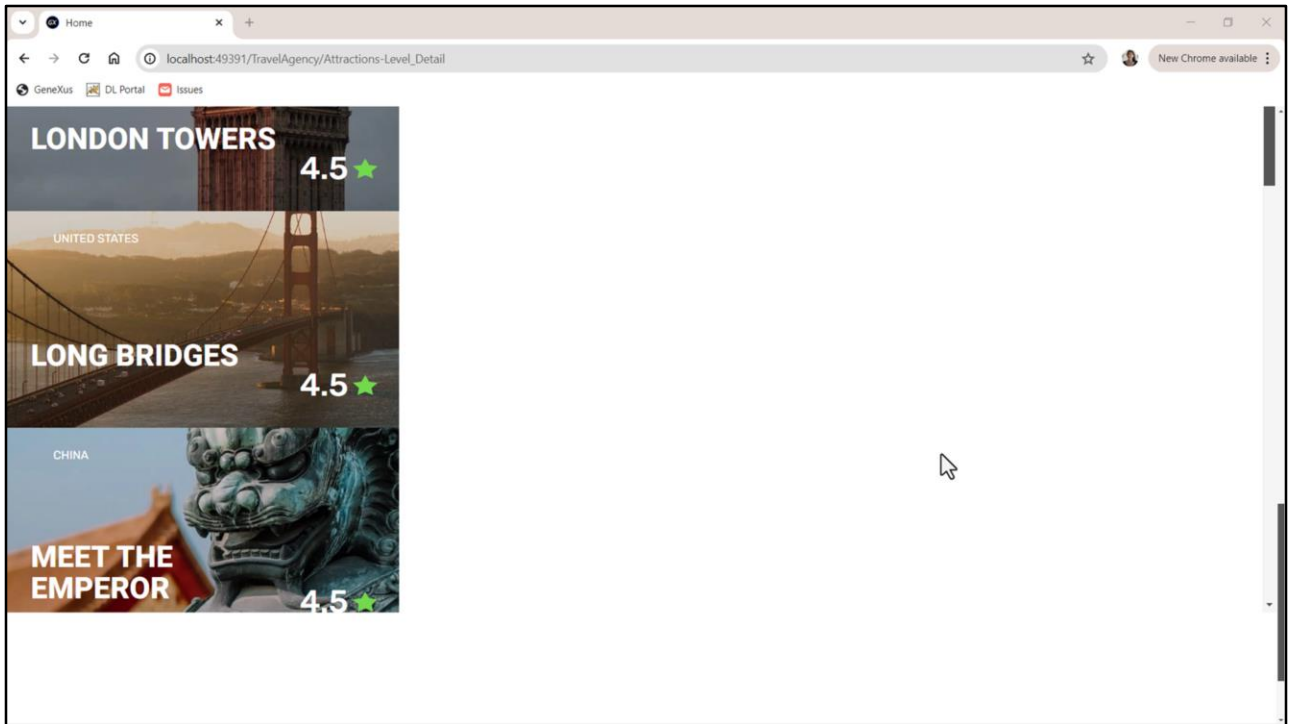


I define the variables in this panel.

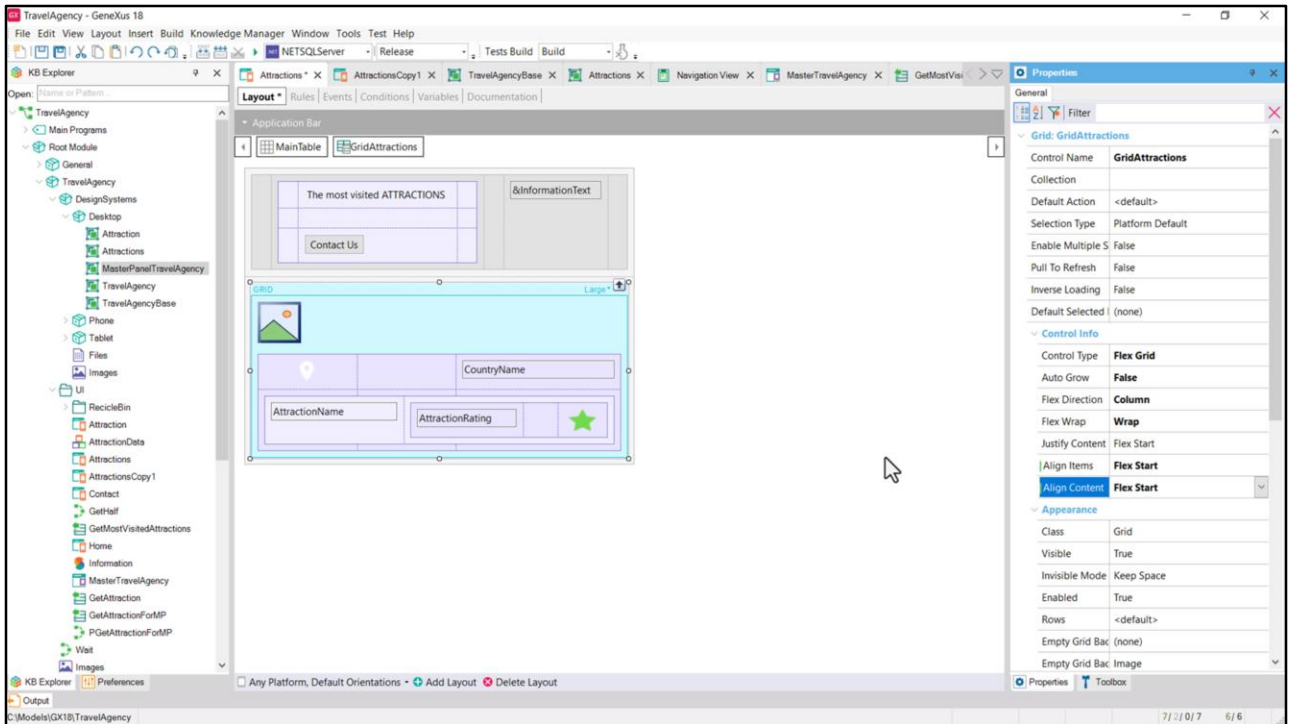
And this is perfect, but note that if I end the name of the grid with a period... I find the eligible property... And there I complete it. Let's place the exclamation mark so that neither this text nor the other one is translated.



Before running it, note that the grid is a standard grid. If I run...

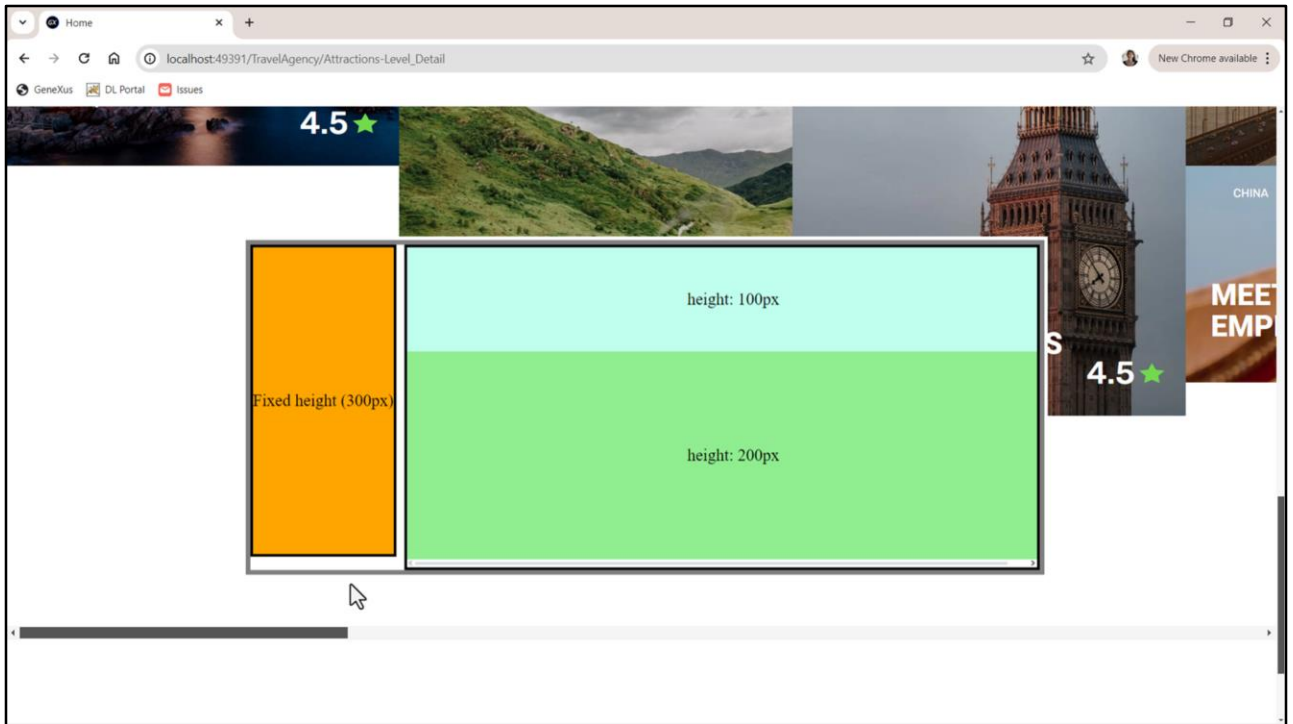


...this is what I see.



I will modify the grid to be Flex. I set the Column direction, Wrap, justify the content according to the beginning, that is to say, to the top edge; the alignment of the items relative to the other axis, the horizontal one, also according to the beginning, that is to say, to the left edge... And this one too.

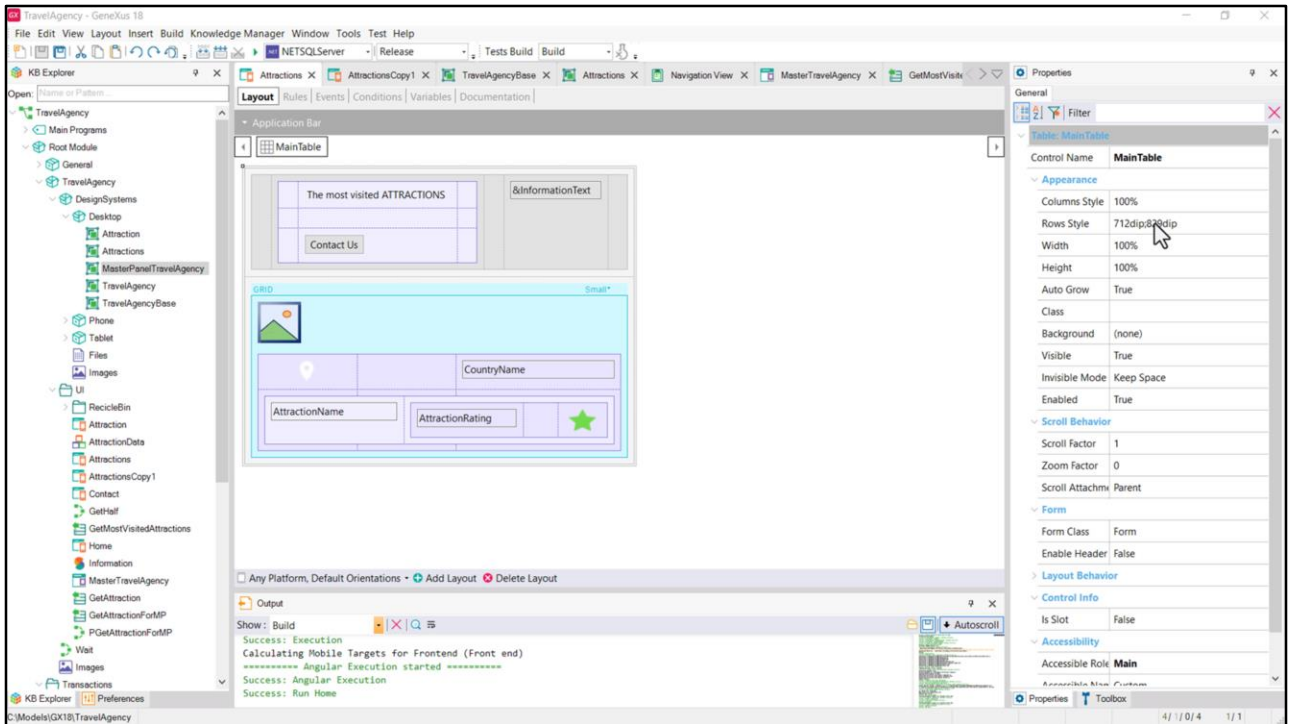
We execute...



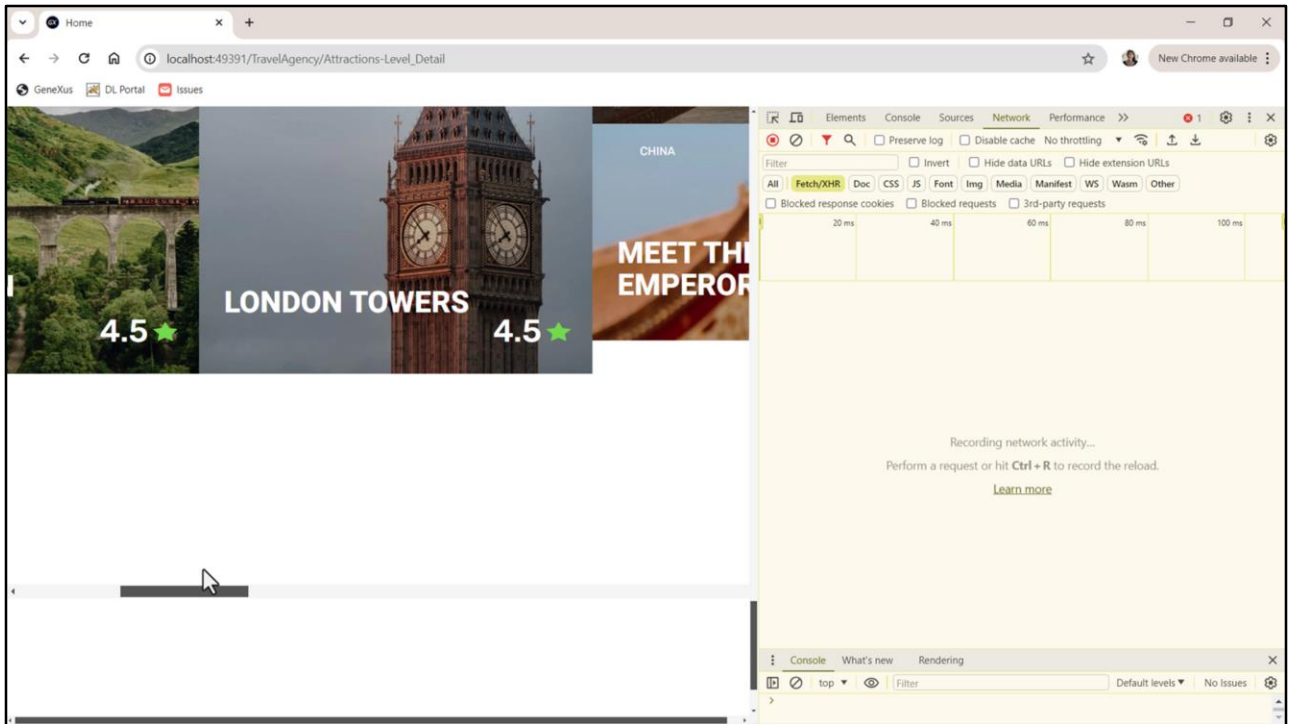
We see that in each column there is only one card instead of 2. Why?

It has to do with this scroll bar, which occupies a separate space in Desktop; this space must be taken into account.

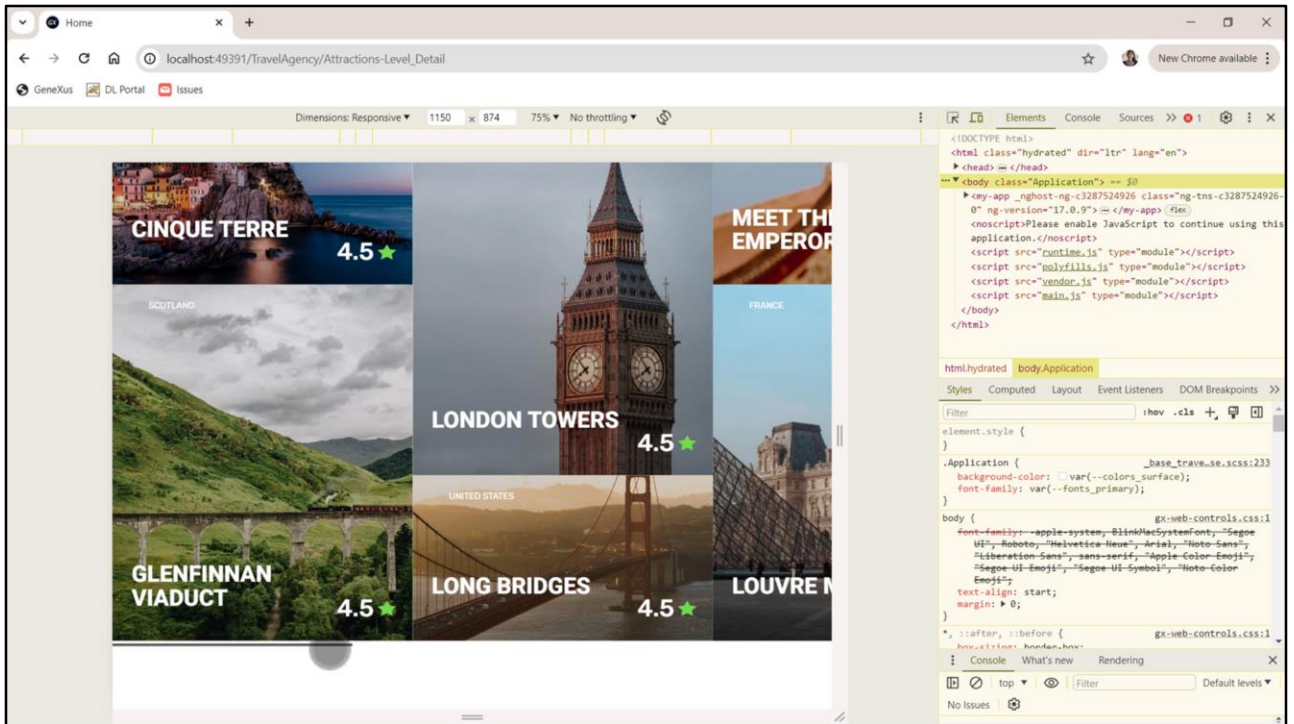
So, for example, if in the grid we have an item that is 100 pixels high and another one that is 200 pixels high, for both to fit the height of the grid cannot be 300; it has to be greater, because it must take into account the height of the scroll bar, which is outside.



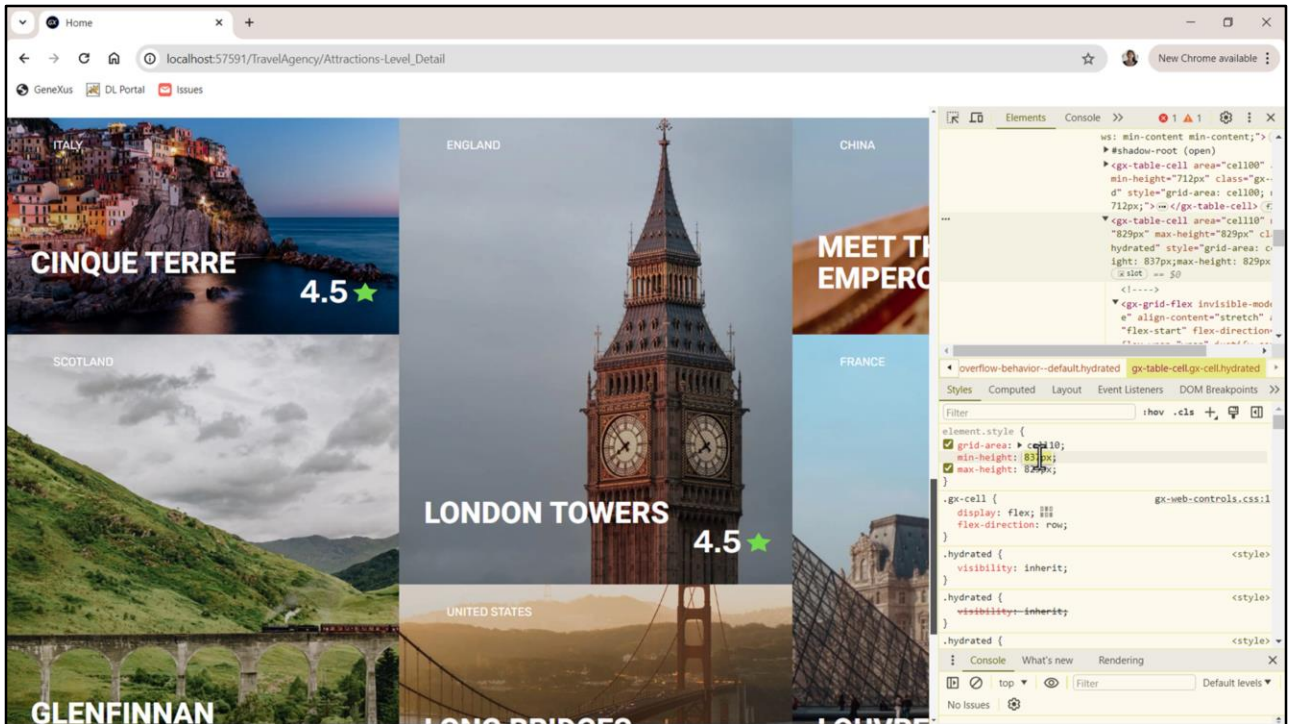
In our case the height we gave to the grid row is 829 dips, and the 2 cards added together give 820 (260 plus 560). Evidently the 9 extra dips are not enough to place the scroll bar and that's why it's not possible to fit two cards per column.



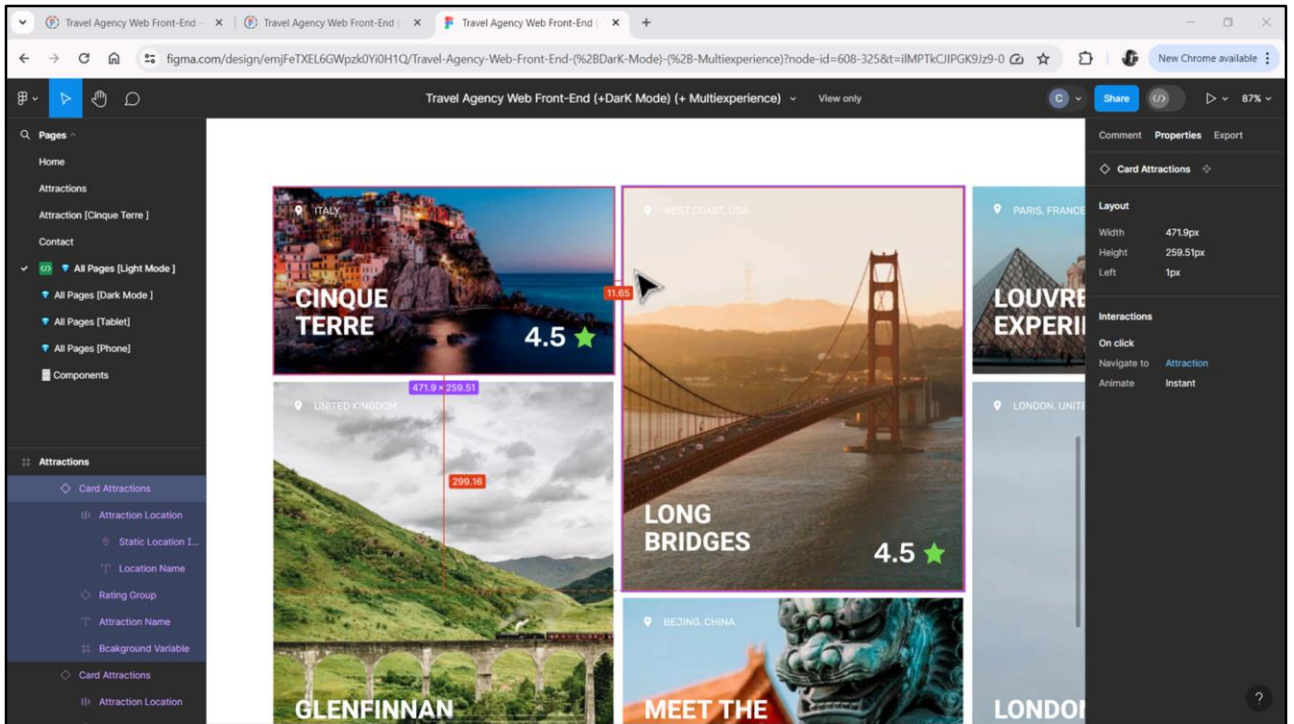
In this F12 I only have Web debugging enabled for desktop and not Web for mobile devices.



See that if I turn on mobile debugging now both cards fit, because in the mobile browser the scroll bar is placed on top.

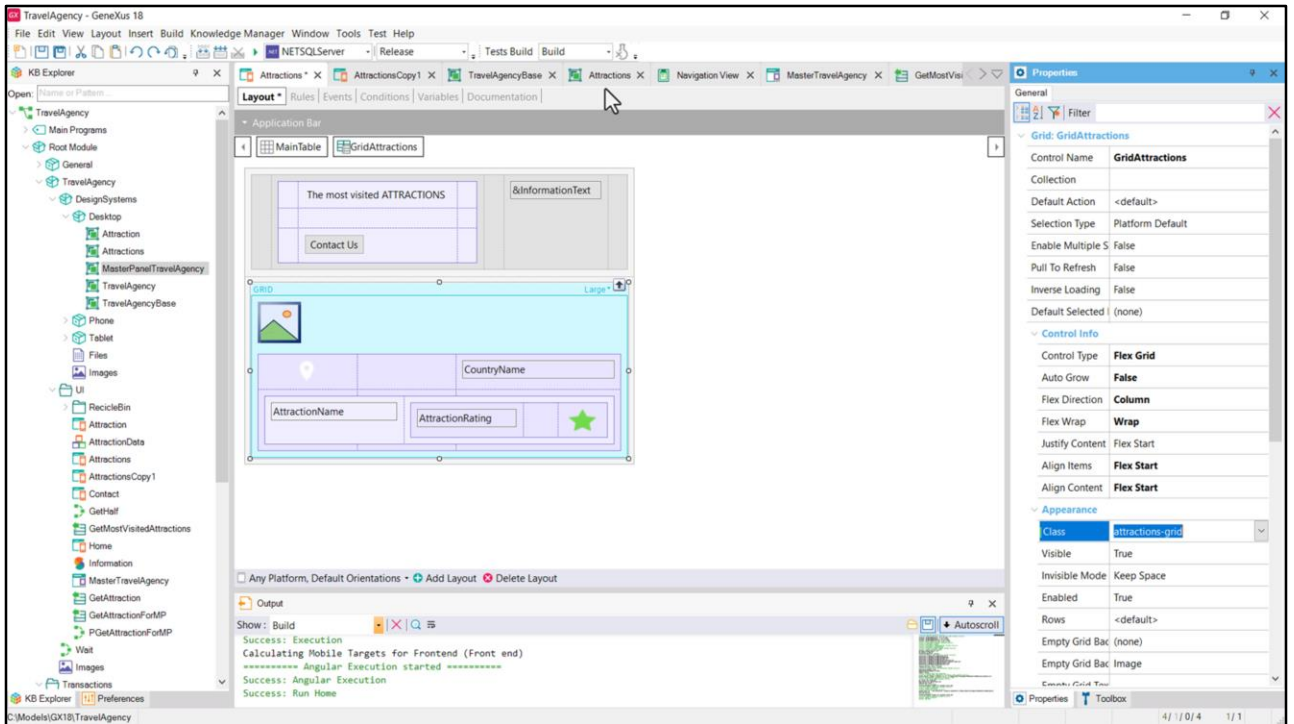


However, the screens we are designing will only be run on Desktop, so we need to solve that scenario. Clearly we need to increase the row's height. When we reach this value, 837, the two cards per column are displayed. And of course if we continue to increase it, we see how the scroll bar is separating, so we needed to assign it 17 dips, because the two cards added up to 820... we need 17 dips for that scroll bar.

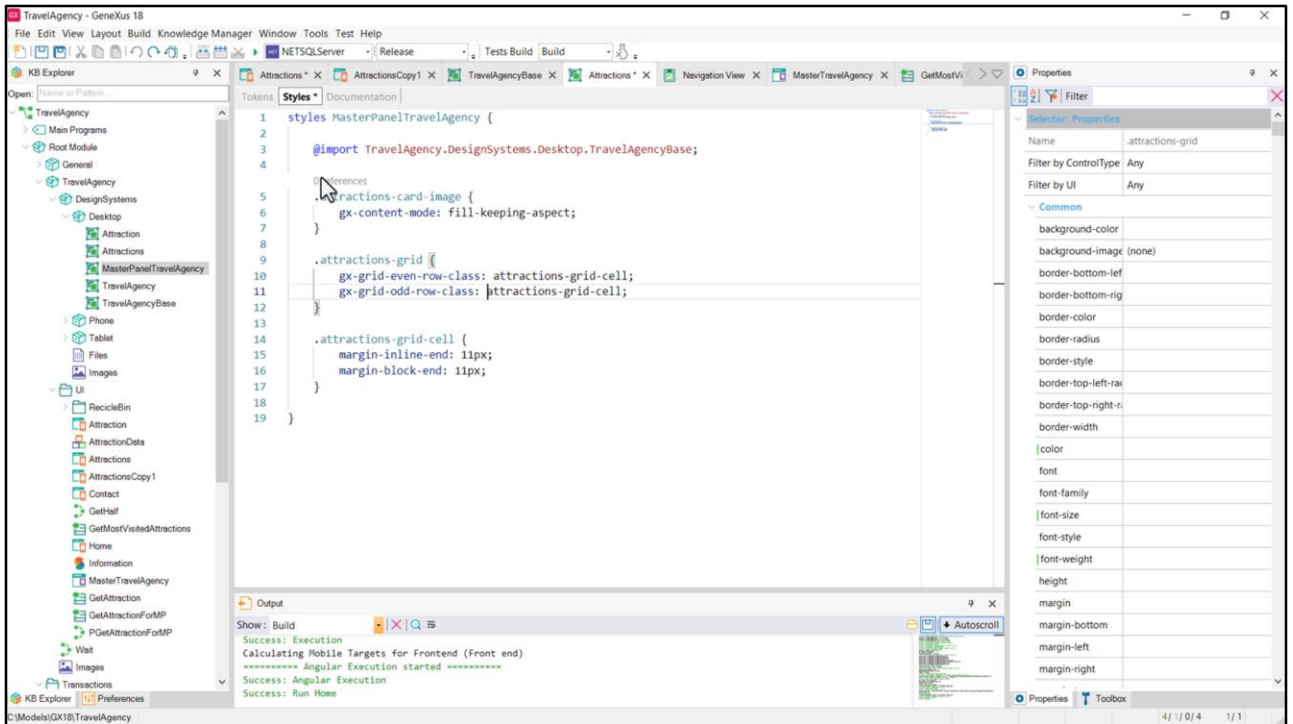


In addition, we need to leave the empty space between cards...

Note that in the Figma design the cards have a margin on the right of a bit more than 11 pixels and below of almost 11. So to all the cards in the grid we could assign a margin of 11 at the end, in both directions.



We can assign a class to the grid...

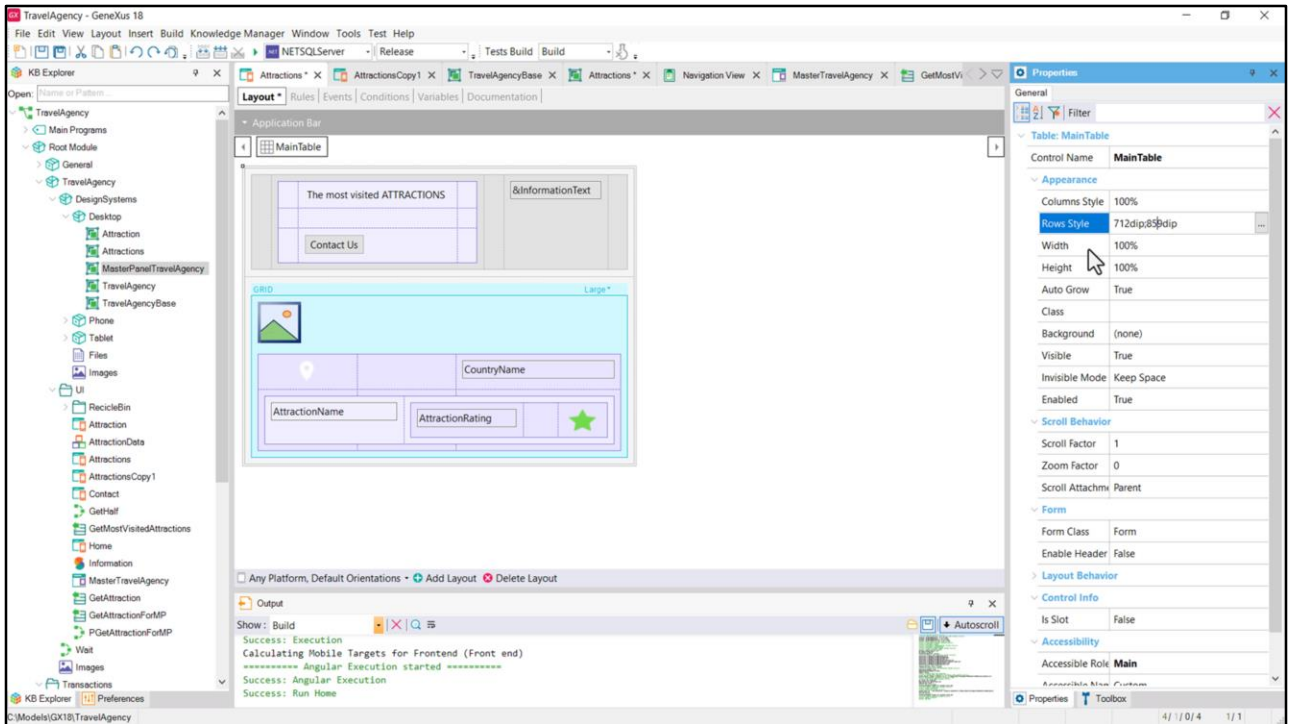


...in which we define, through the gx-properties: **gx-grid-even-row-class** and **gx-grid-odd-row-class**, classes that give a style to the grid cell when it is an even item or odd item.

This row here in the name must be understood as the position of the item. That is, beyond how the rendered items are displayed on the screen, something that among other things depends on the type of grid, conceptually every grid is an ordered list of items. So there is the first, the second, the third one and so on. Then we must see how this order is rendered, as I said. The property **gx-grid-even-row-class** will apply to all the items that occupy an **even** position in that list, and **odd** to those that occupy an **odd** position. It allows this discrimination, let's say, this alternation between odd and even.

In our case, to all the items we want to apply the same class, which I will call **attractions-grid-cell**. Also, I will define these two properties: **margin-inline-end** of 11 pixels and **margin-block-end**, that is, in the other direction, also of 11 pixels.

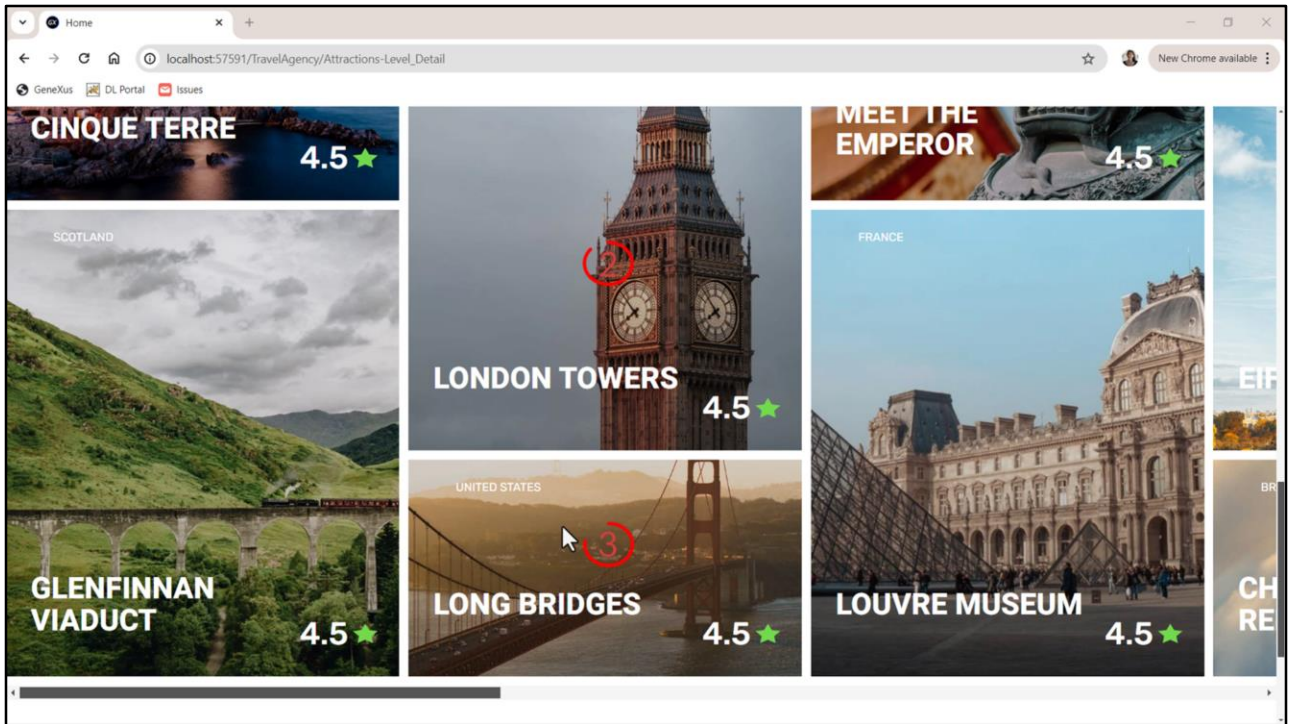
And then I simply set the class for the odd and even items to be the same and it is this one.



What I have to do now is to calculate the height I have to give to the grid row. It will be 11 x 2, due to the block end margin of the two cards plus the 820 height of the two cards added together, plus the 17 of the scrollbar.

So... I go to Attractions... and in the second row... I place this value.

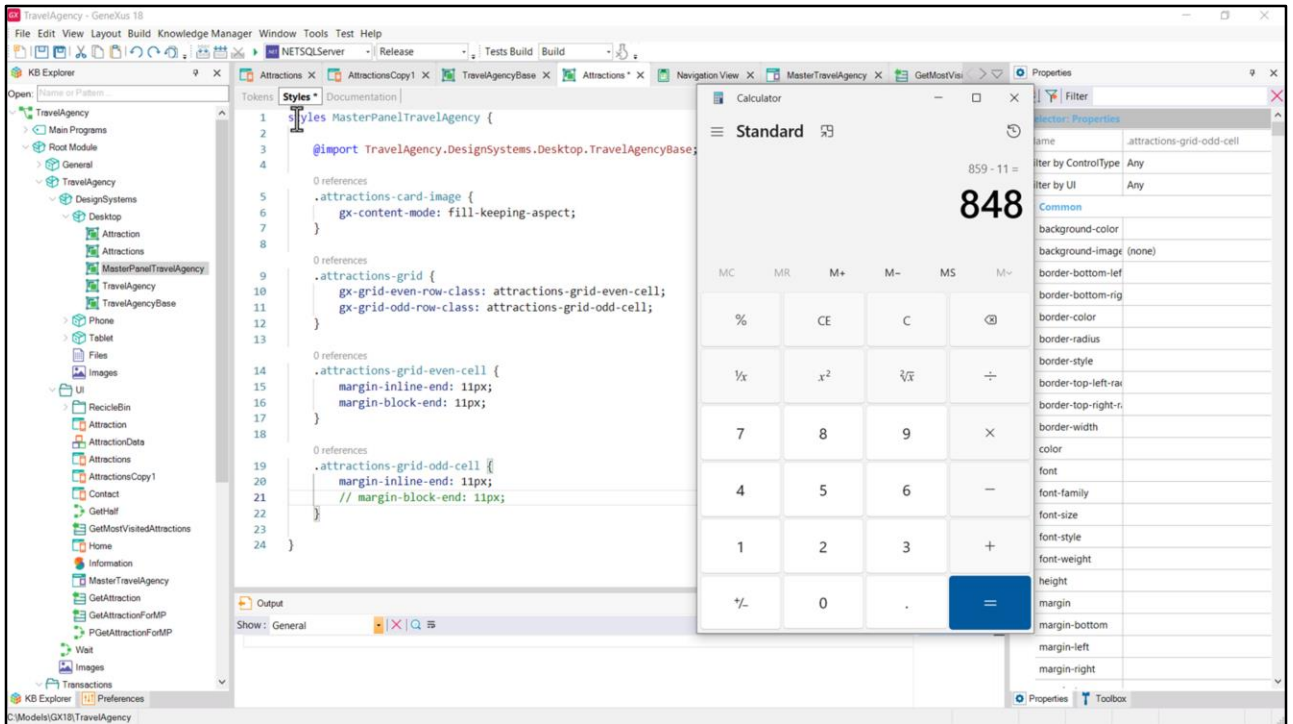
Let's execute.



Perfect.

What if we don't want the bottom margin for the lower cards?

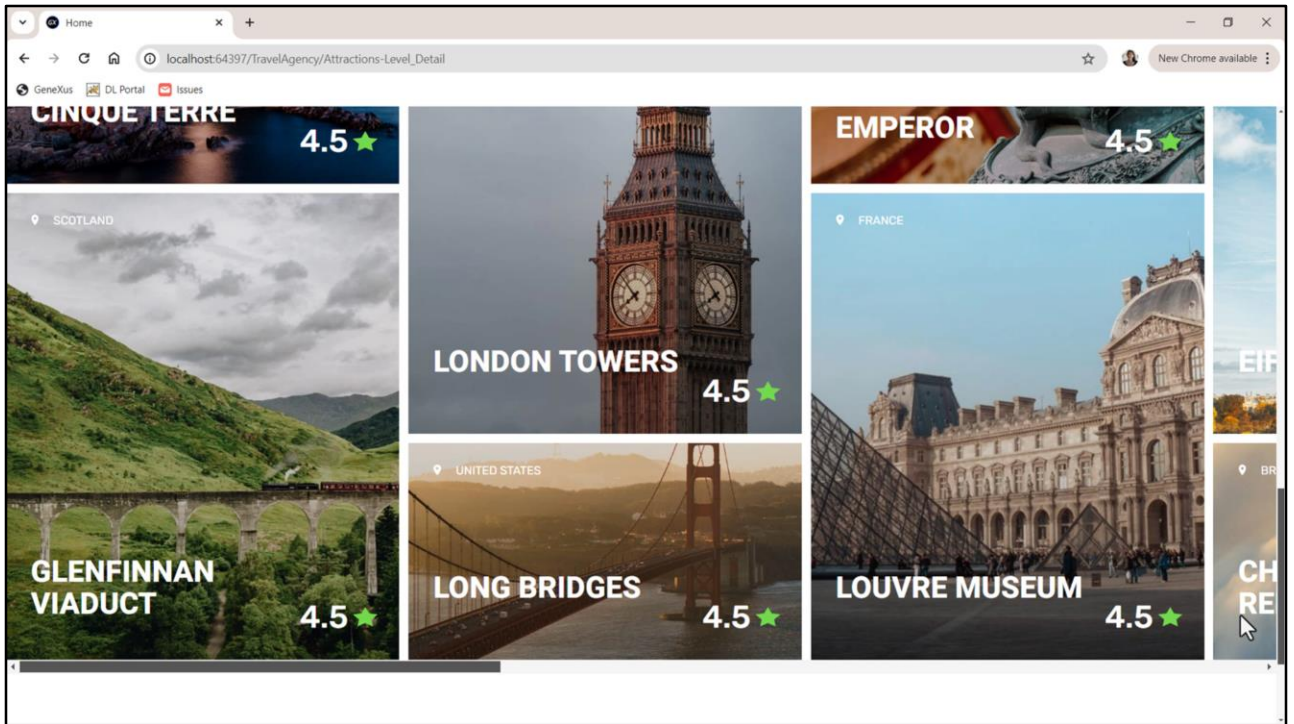
The lower cards will be the odd cards, if we start counting at 0.
0, 1 ... 2, 3 ... 4, 5 ... and so on.



Then we can do this...

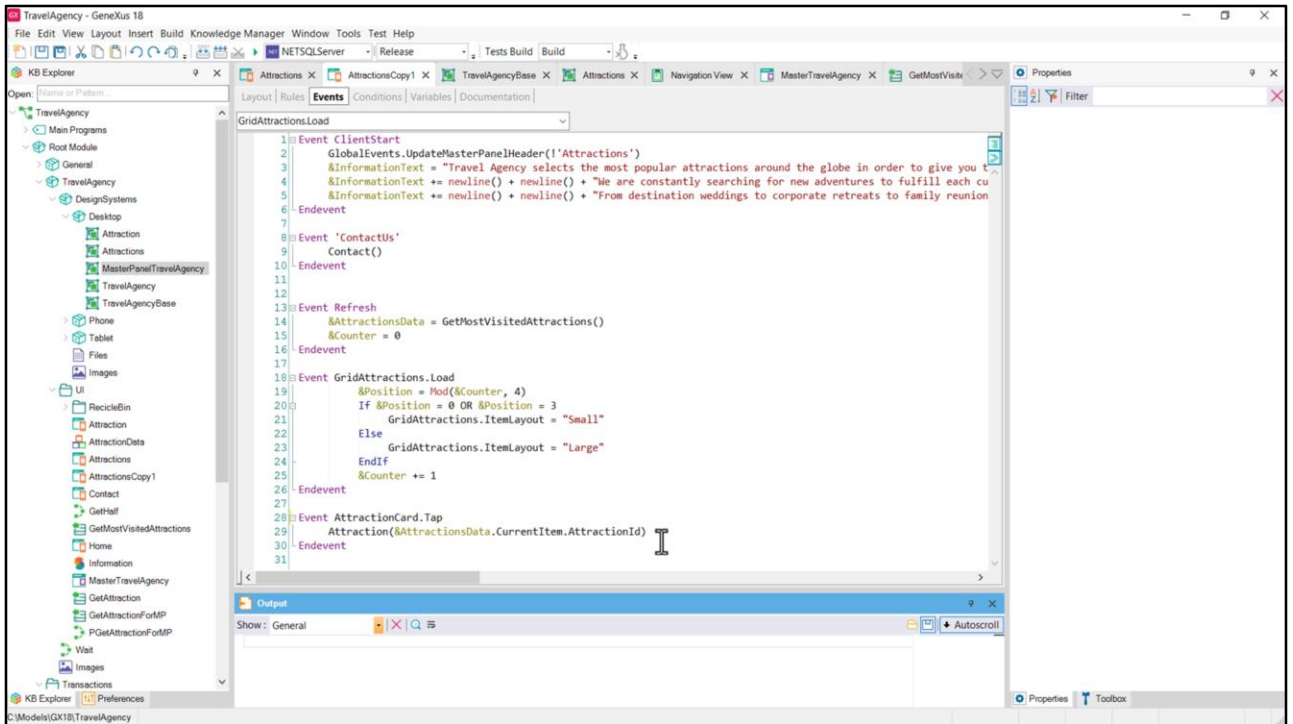
We differentiate two classes: one for the even and one for the odd cards, and we remove the bottom margin from the odd ones.

And now we subtract these 11 from the row height.



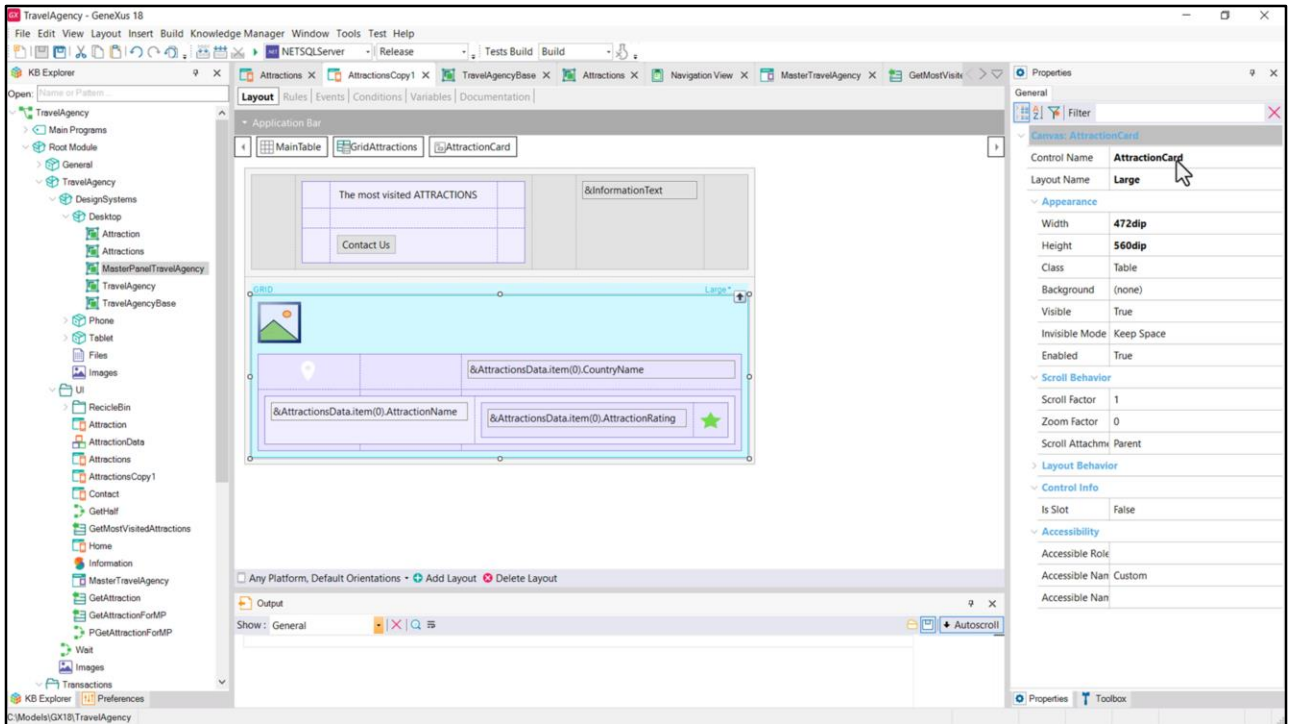
And we execute...

OK, we see that the bottom margin is no longer there.

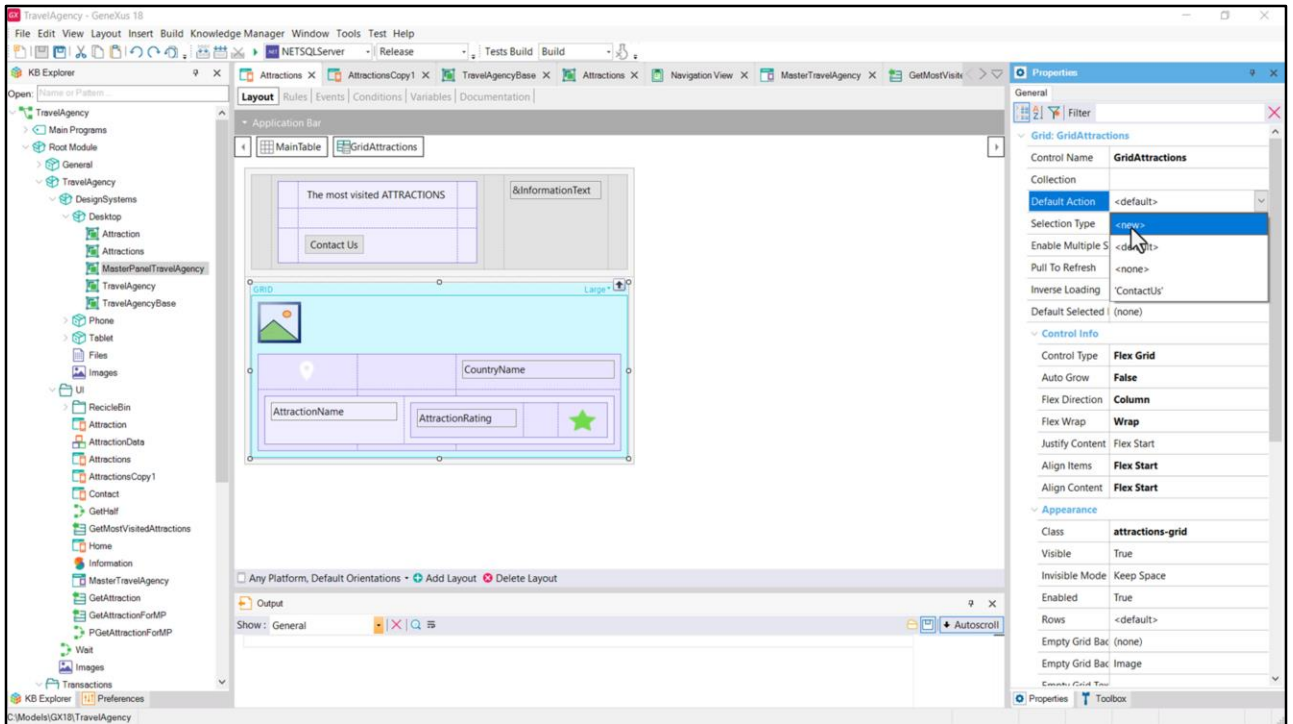


In my solution, let's do the same with the grid associated with the SDT...

Now let's pay attention to this Tap event that we had associated with the Canvas of each item to invoke the Attraction panel by passing it the ID of the attraction.

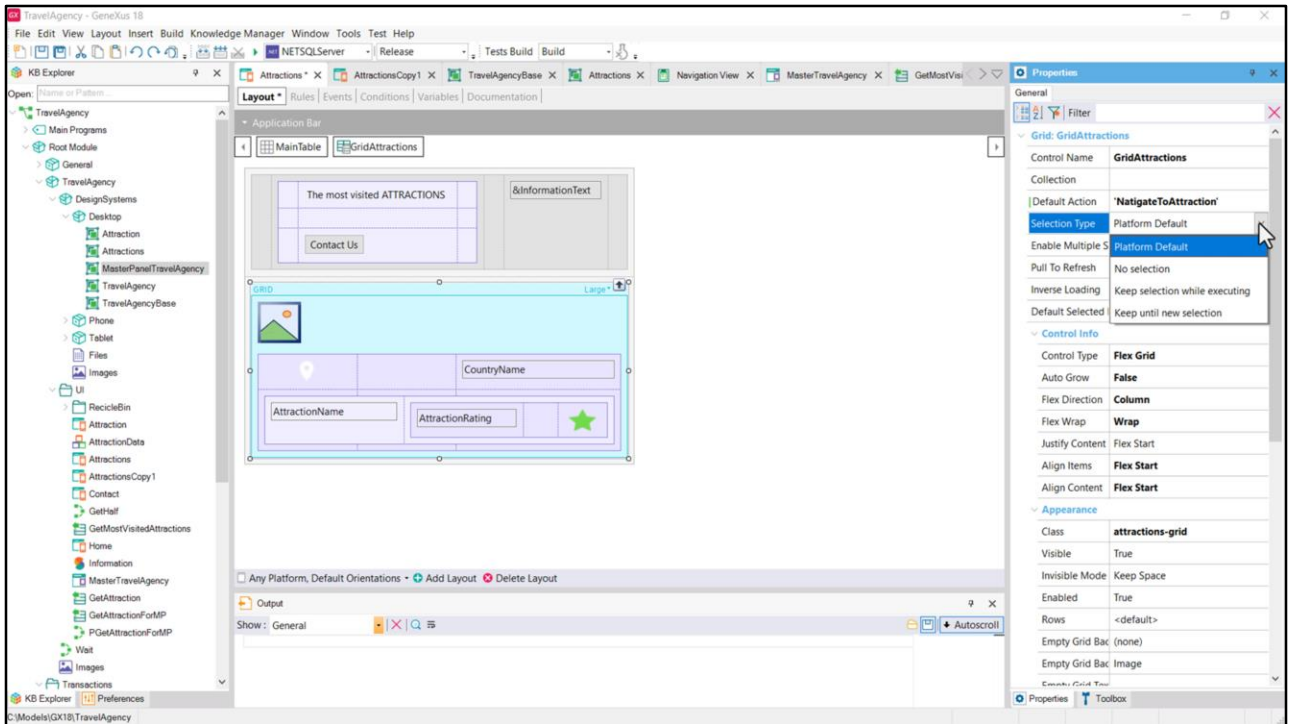


This is not the best solution, because we have programmed the tap for the control named AttractionCard, which actually corresponds to two different canvases: that of the Small layout and that of the Large layout (in fact, I had to explicitly give it the same name, so be careful).

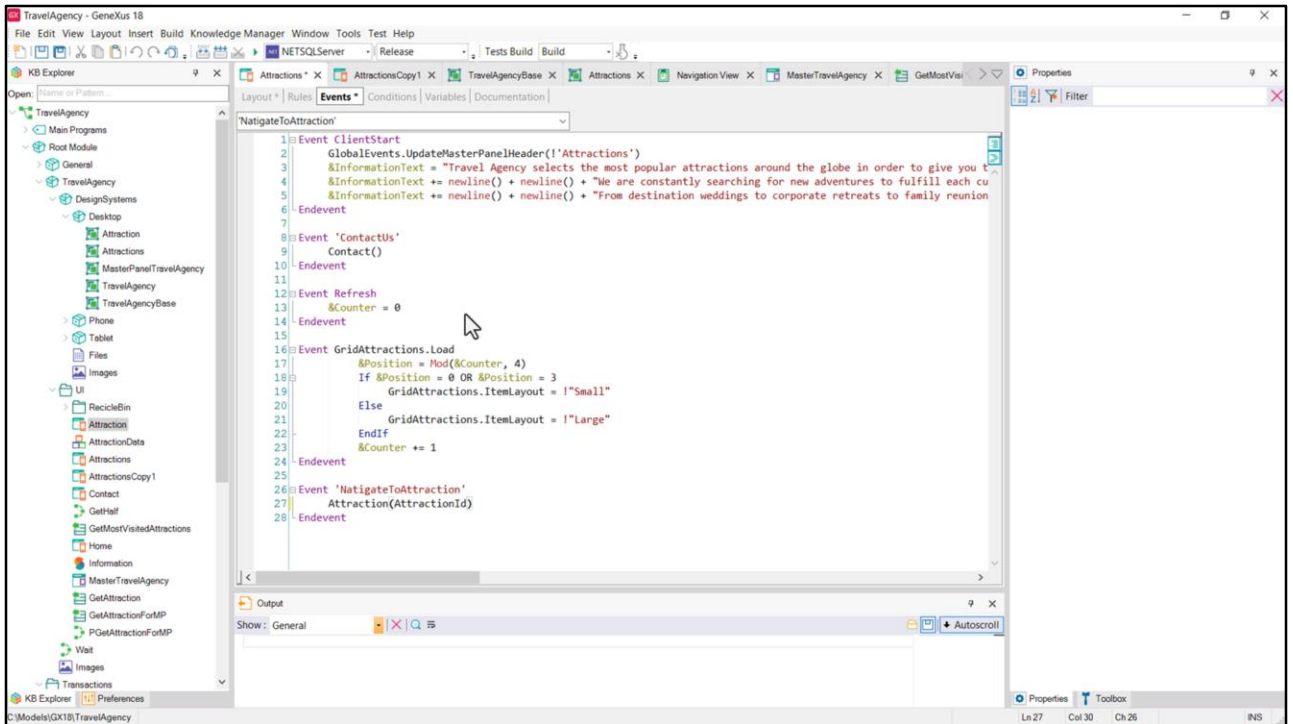


The grid has a predefined event that corresponds to a tap or click on any of its items. It corresponds to this property, Default Action. Let's use this other solution in our Attraction panel.

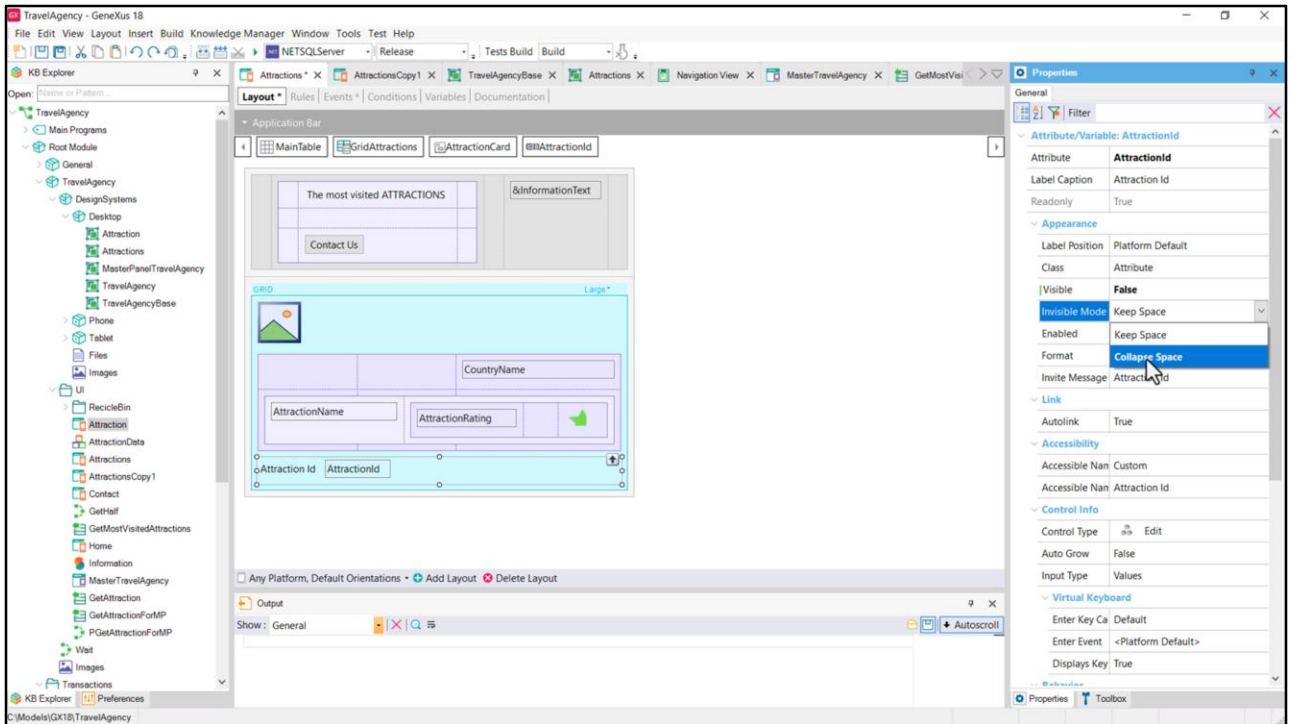
What I do is to create a new user event, which will correspond to the default action on the items of the layout. I give it a name...



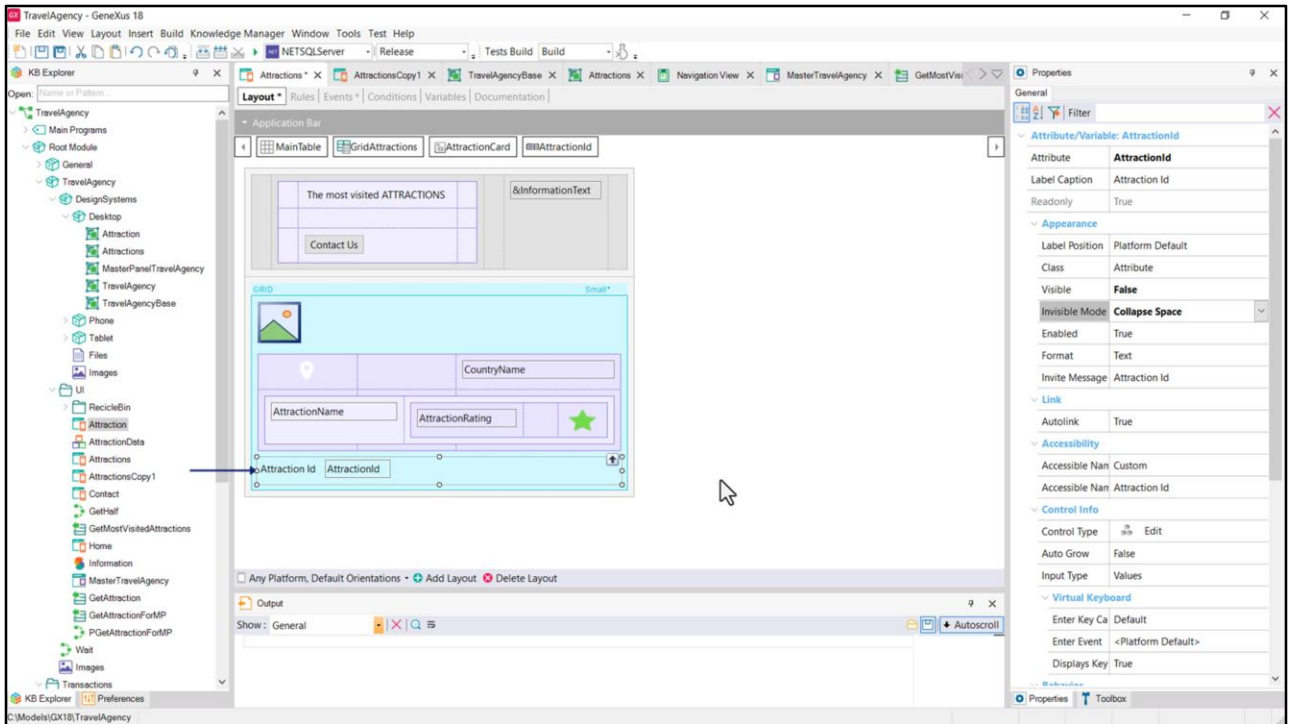
Now let's see that there is a set of properties that allow defining a certain behavior of the grid... for example, whether to allow selecting grid items, what type of selection, and so on.



Here is the event and what we will have to do is to invoke the Attraction panel, passing it the attraction identifier, which in this case will be in the AttractionId attribute. But do we have the attribute loaded in the grid item so that we can pass it to this other panel once the grid is loaded?

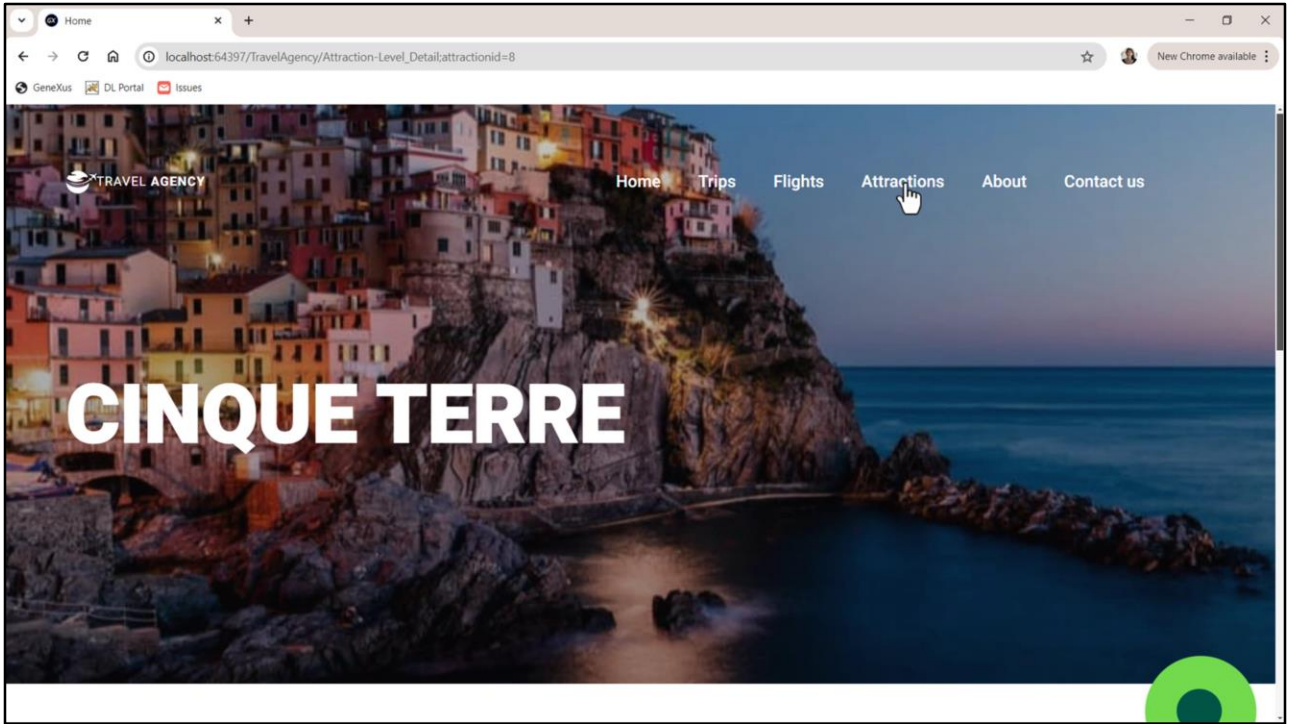


Initially, it seems that we don't. So if we want to make sure that this value is available, we can insert the attribute, set it as invisible and also set that no space is reserved for it in the layout when it is invisible, precisely.

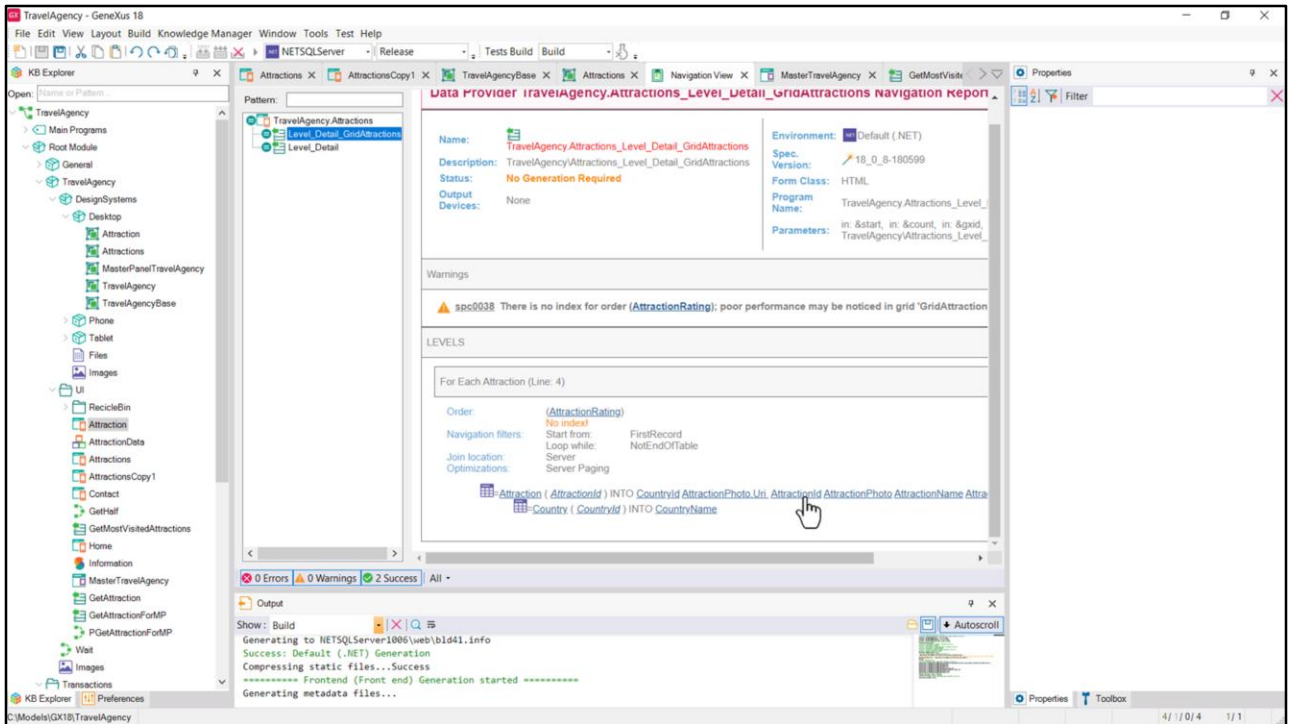


Well, this applies to the Large layout. We'll have to do the same for the Small one. And this can start to bother us, these duplications, and we can be tempted to create a stencil for these cards.

If we don't do it, then I have to copy this control and paste it here.

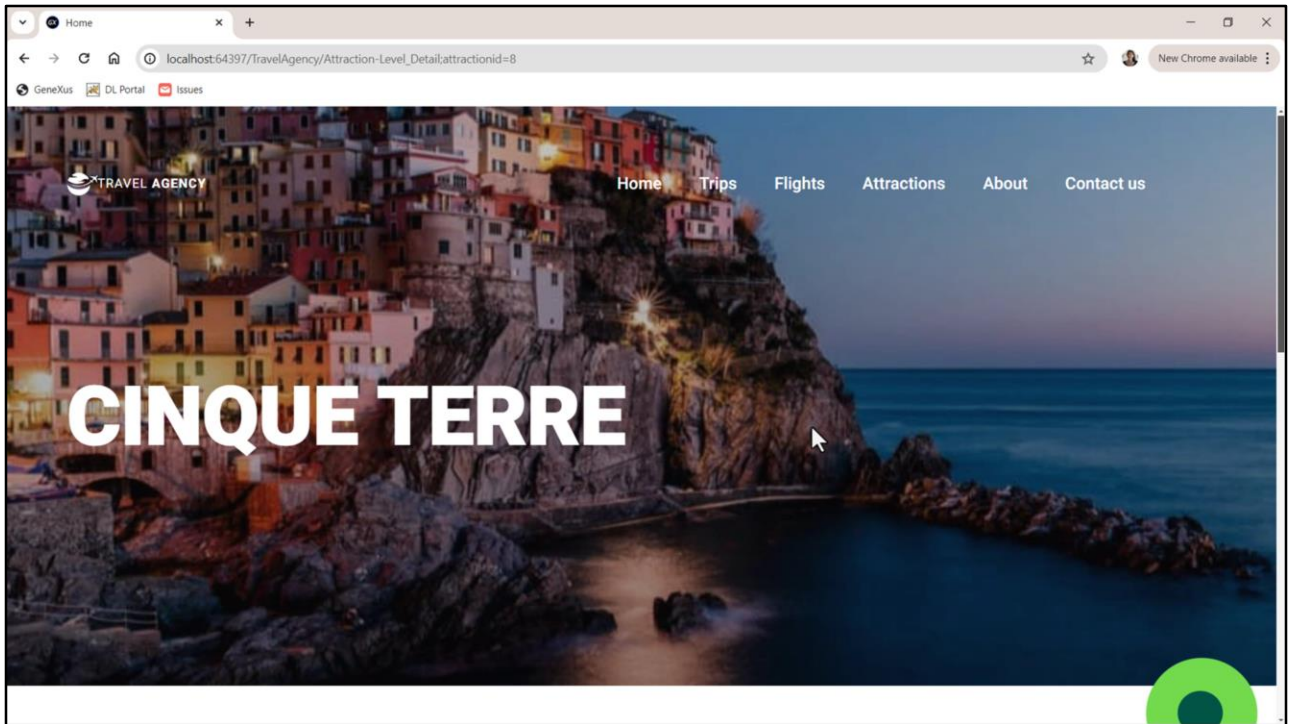


If we run now... ok... Let's try another one... the large one... perfect.



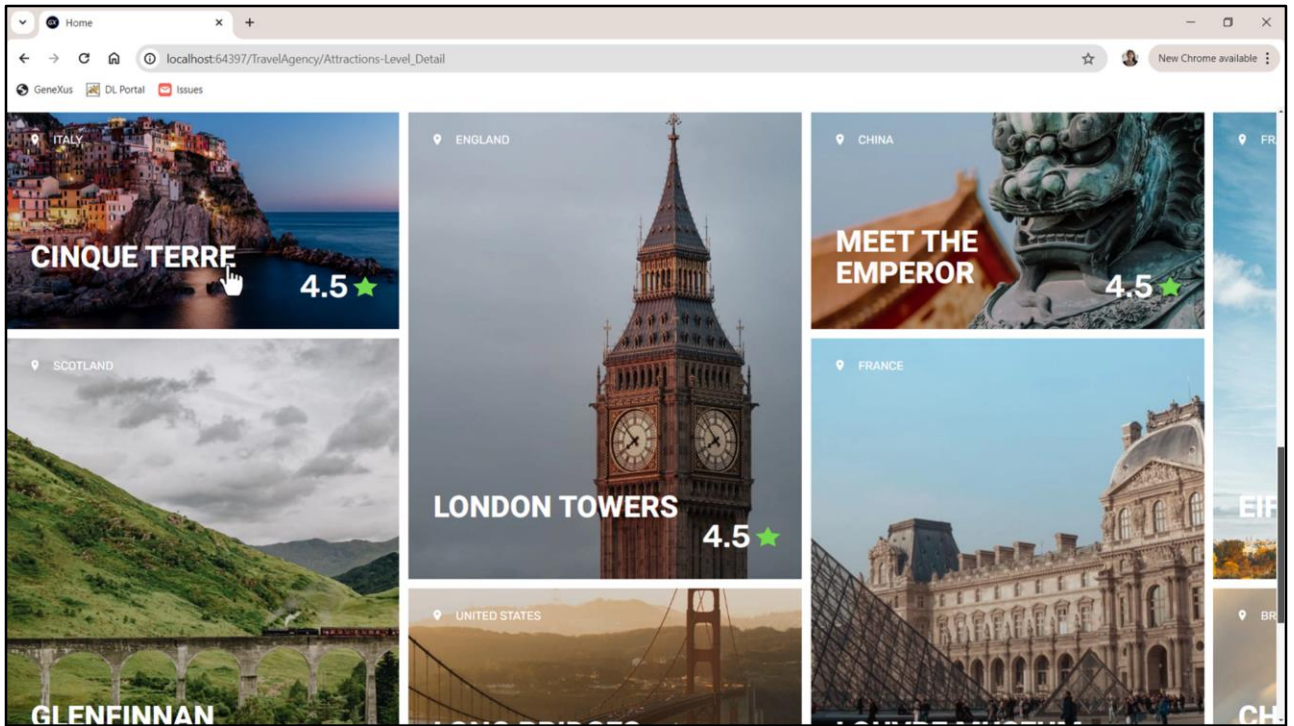
Now let's see if it was necessary to set the invisible attribute. Let's remove it... and remove it from the Large layout as well.

We run it. But before it ends let's look at the navigation list. In the Data Provider corresponding to the grid, it informs us that it is bringing AttractionId. It's going to store it internally. We didn't have to do what we did.

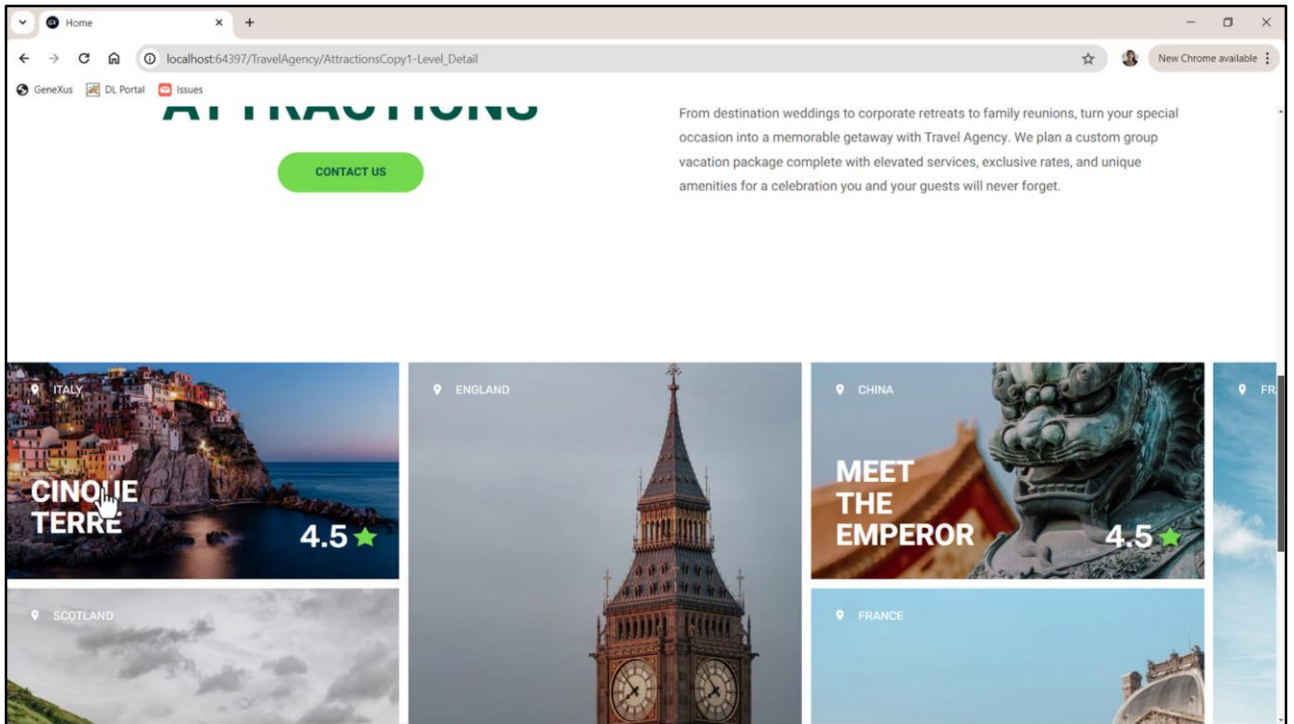


And let's finish checking... OK.

It is indeed passing the attraction ID because it counts on it and GeneXus did it automatically. I'm telling you this because in Web panels this is not the case.

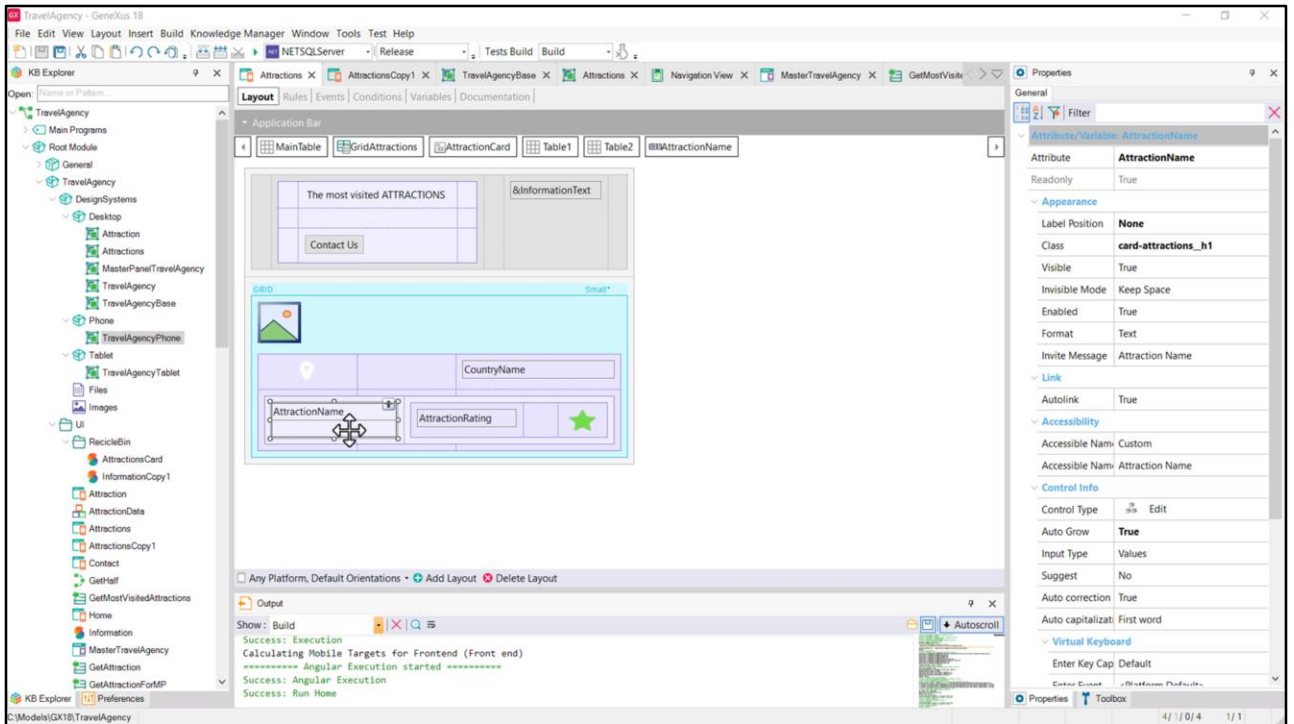


Something that may catch our attention is that here the text is not split into lines...

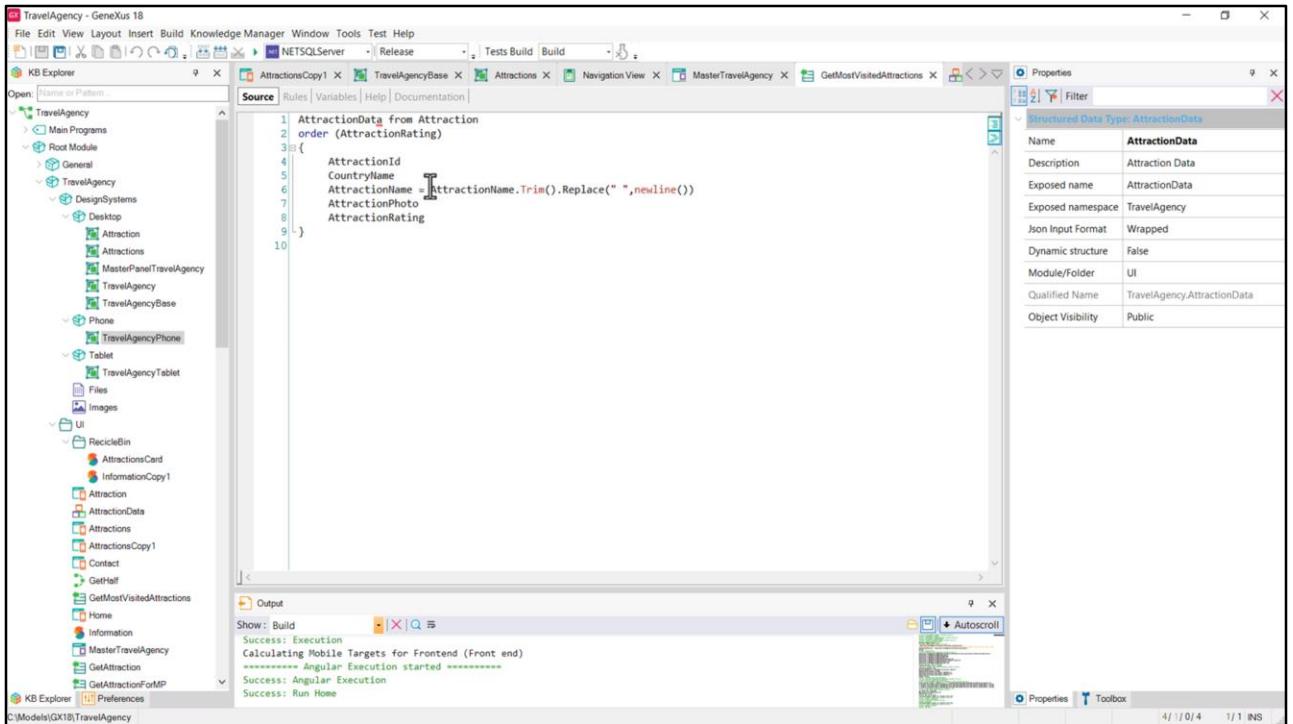


...as it was in the solution with the SDT.

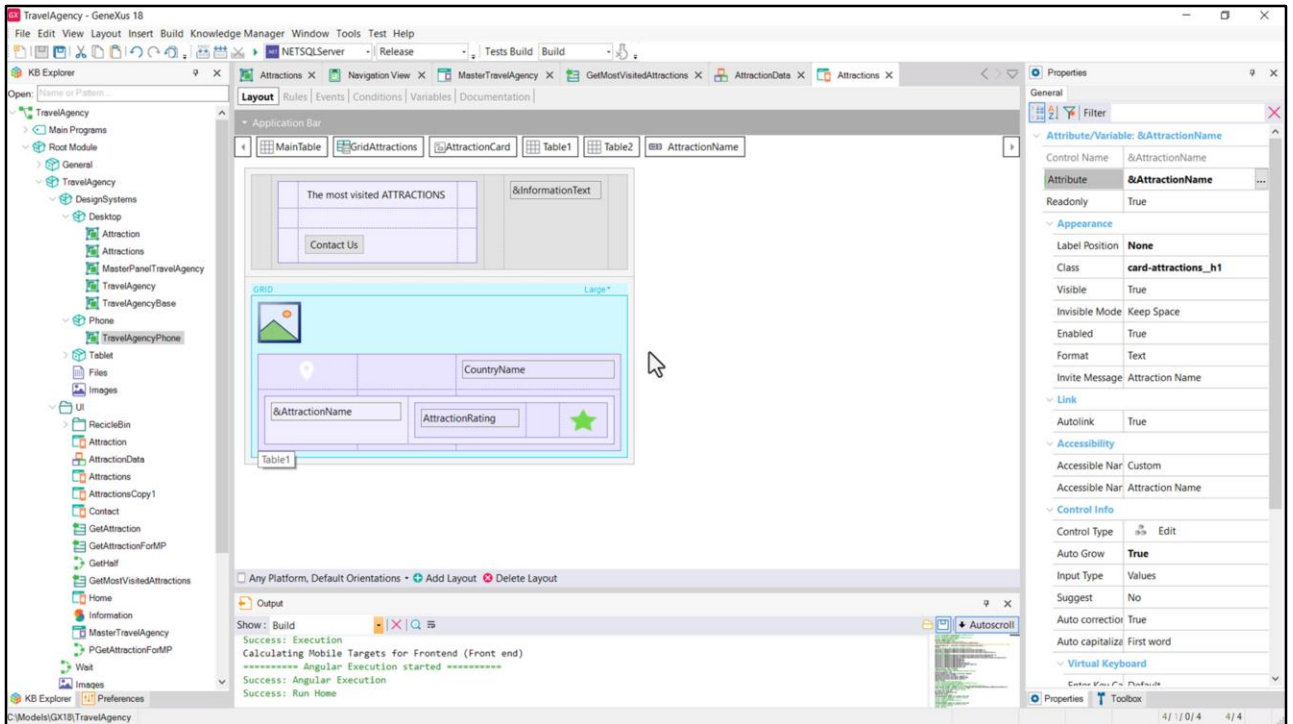
There are breaks when the text doesn't fit in the space.



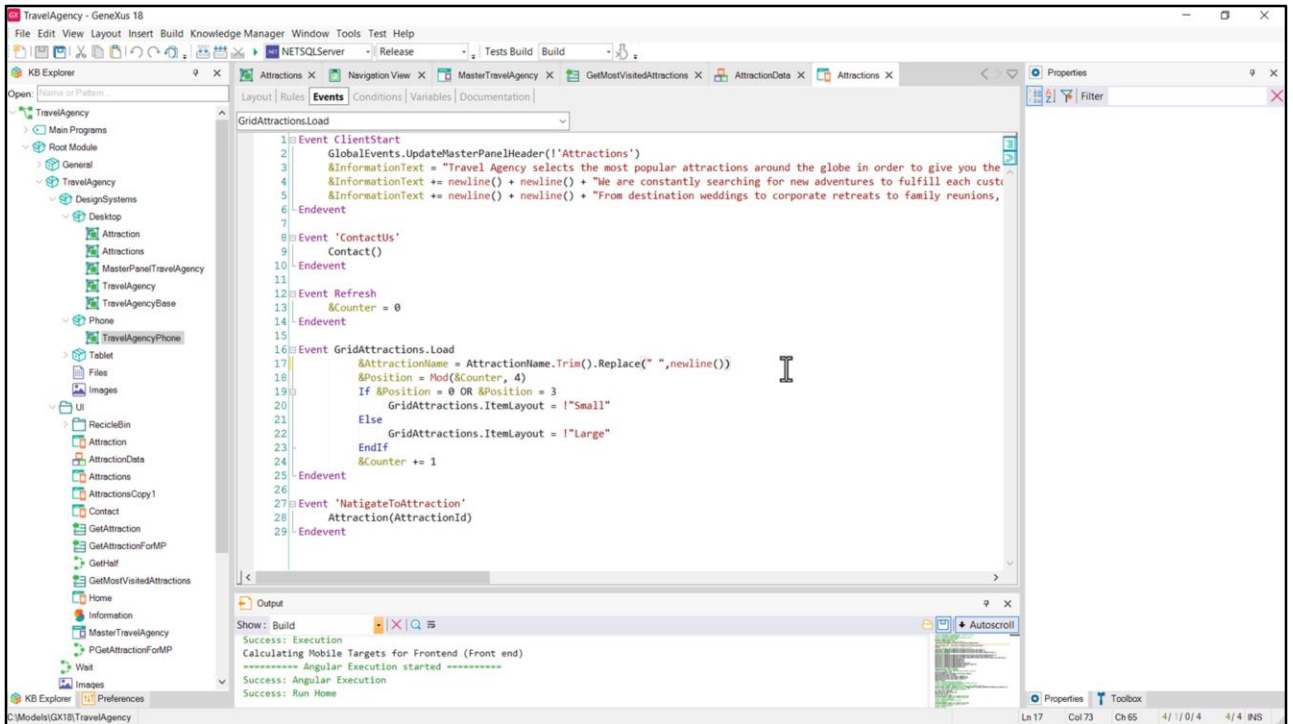
When using the attribute, its content is displayed as it is loaded in the database.



In my solution, instead, I process what I return to the SDT for this field in this way.

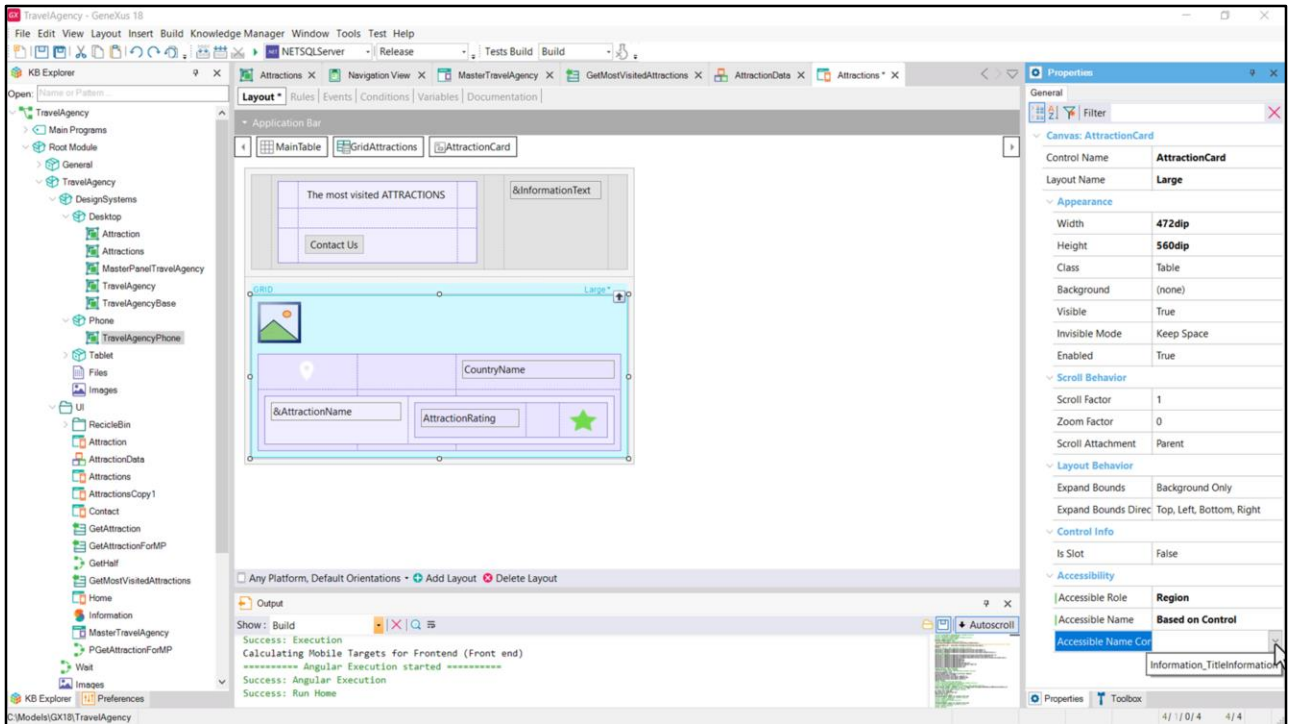


To adapt my solution, I would have to place a variable here instead of the attribute; this variable should be based on the attribute (for example, by calling it the same, it will automatically offer me to base it on the attribute of the same name) and I would have to do the same for the other layout item.

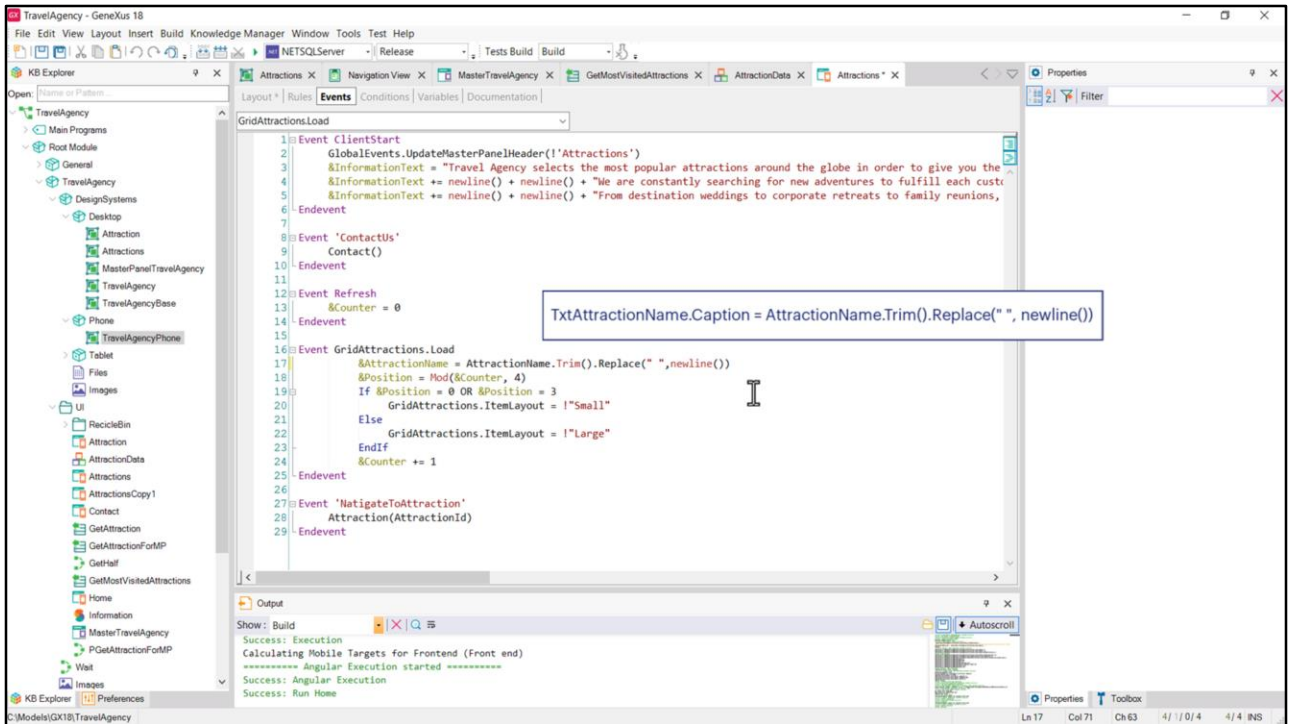


And in the Load event I should assign this value to the variable.

If we now execute, all the texts look as we wanted.

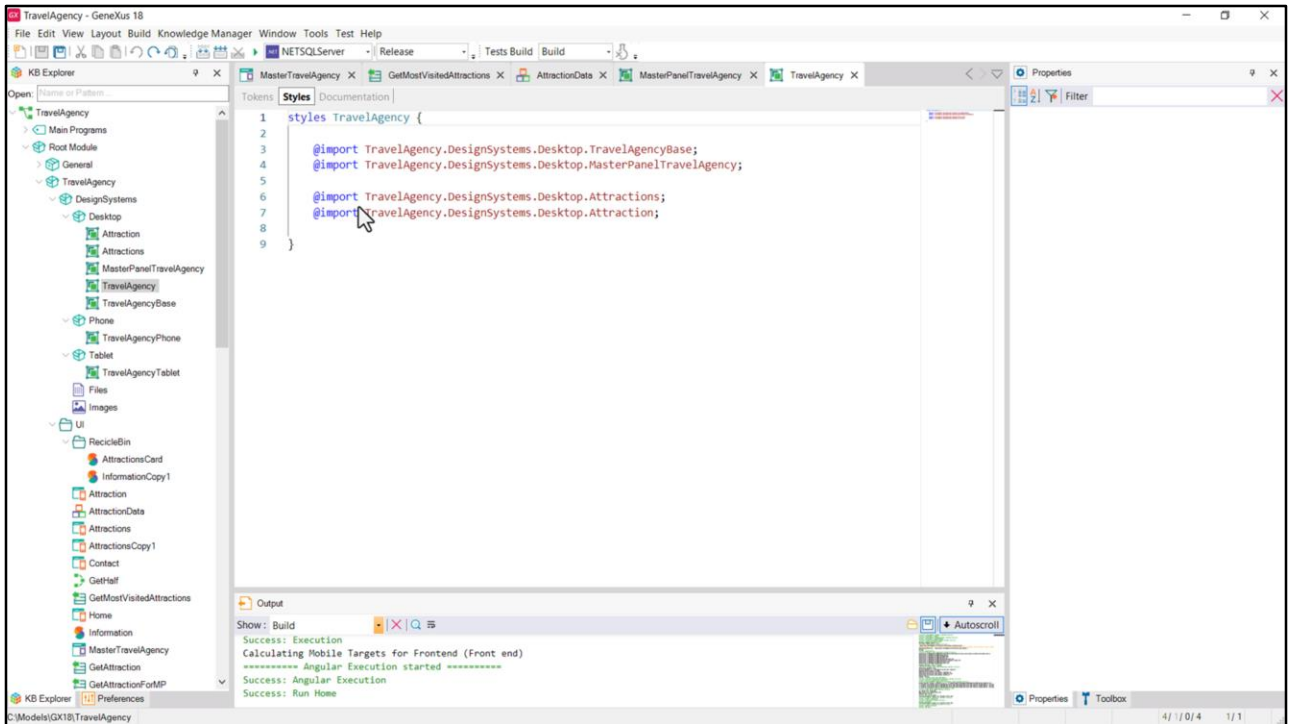


To address accessibility, we would have to make each card show as its name the name of the attraction; for that we should place Region here... and in Accessible Name not Custom but the one based on a control... but for now we can only base on TextBlock control and not on a text variable... so, in fact, instead of the AttractionName variable, we should place a TextBlock...

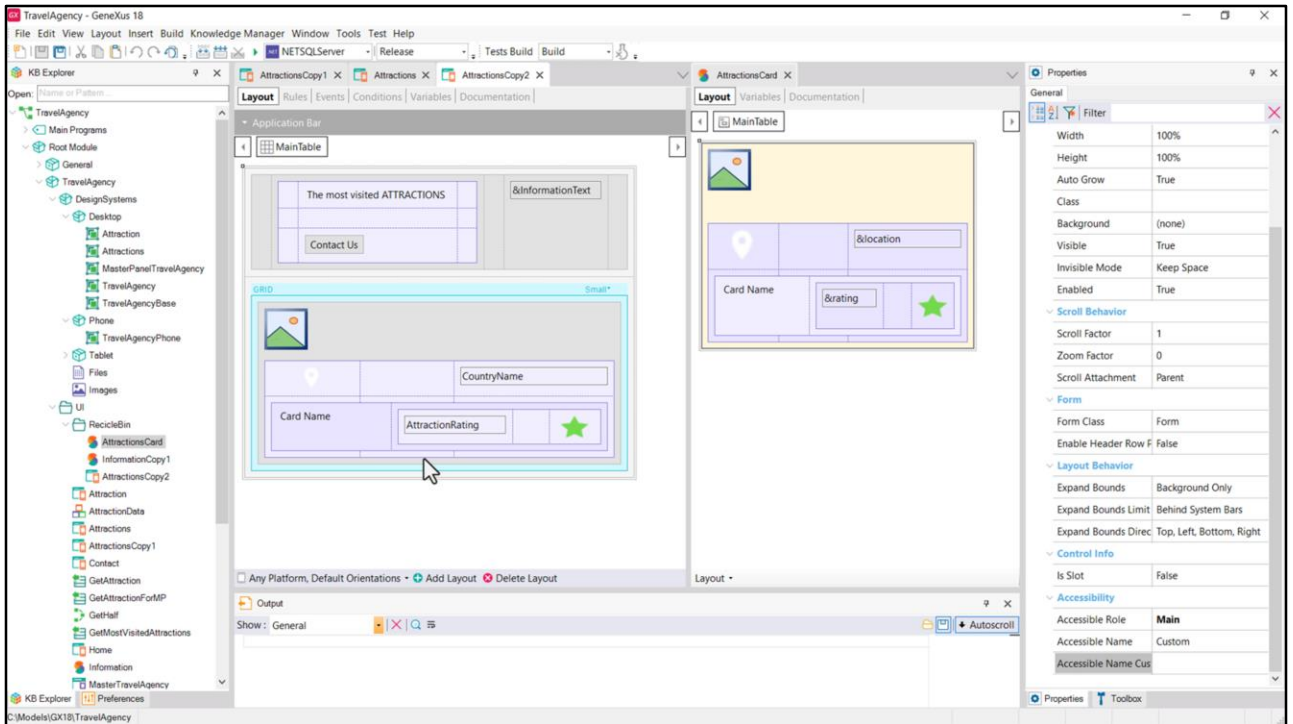


...and make this assignment to the Caption property. So as not to make this too long, I leave it for you to do it.

The grid also has accessibility properties.



I hadn't mentioned it explicitly so I do it now: I created an DSO per object whose UI I've worked with so far. Therefore, I have that of the Master Panel, of Attraction, of Attractions which was the one where we did all this...
The Base one, and in TravelAgency, which will be the parent of all, of course I had to include all the others.



Finally, we could have used a stencil so as not to duplicate the layout of the cards, since the only difference between the Small and Large items was the height of the canvas and nothing else.

Then we could have inserted a stencil control for each layout item... that way everything related to the card layout is solved only once. For example, if we want to change the distance of this table in relation to the Top...

We do it here and it will automatically affect both layout items.

However, there are some clarifications to be made in this solution, which are related to how to work with relative values for the internal table of the grid, which we can't go into right now, and that's why I won't dwell on this solution. However, I'll leave an xpz file for you to explore all this.

GX

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