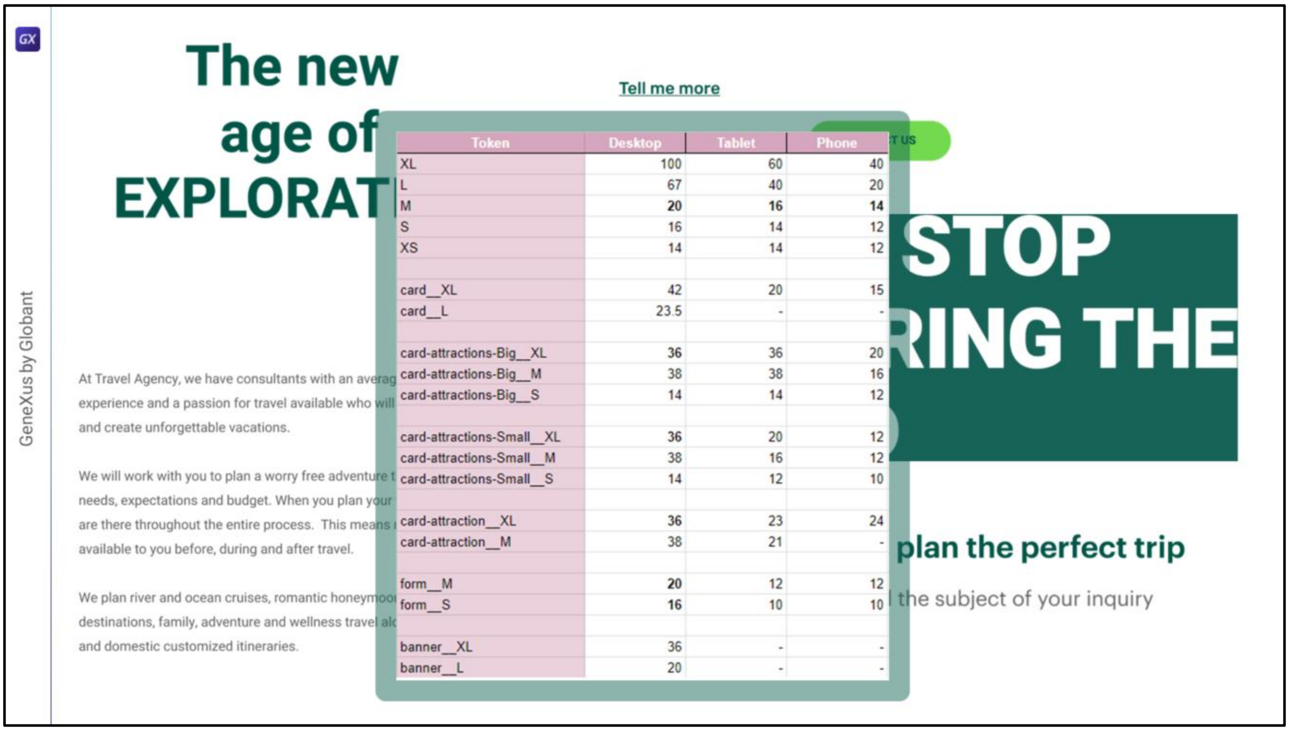
GeneXus by Globant

FontSizes system in GeneXus

Cecilia Fernández



At Travel Agency, we have consultants with an averag
experience and a passion for travel available who will
and create unforgettable vacations.

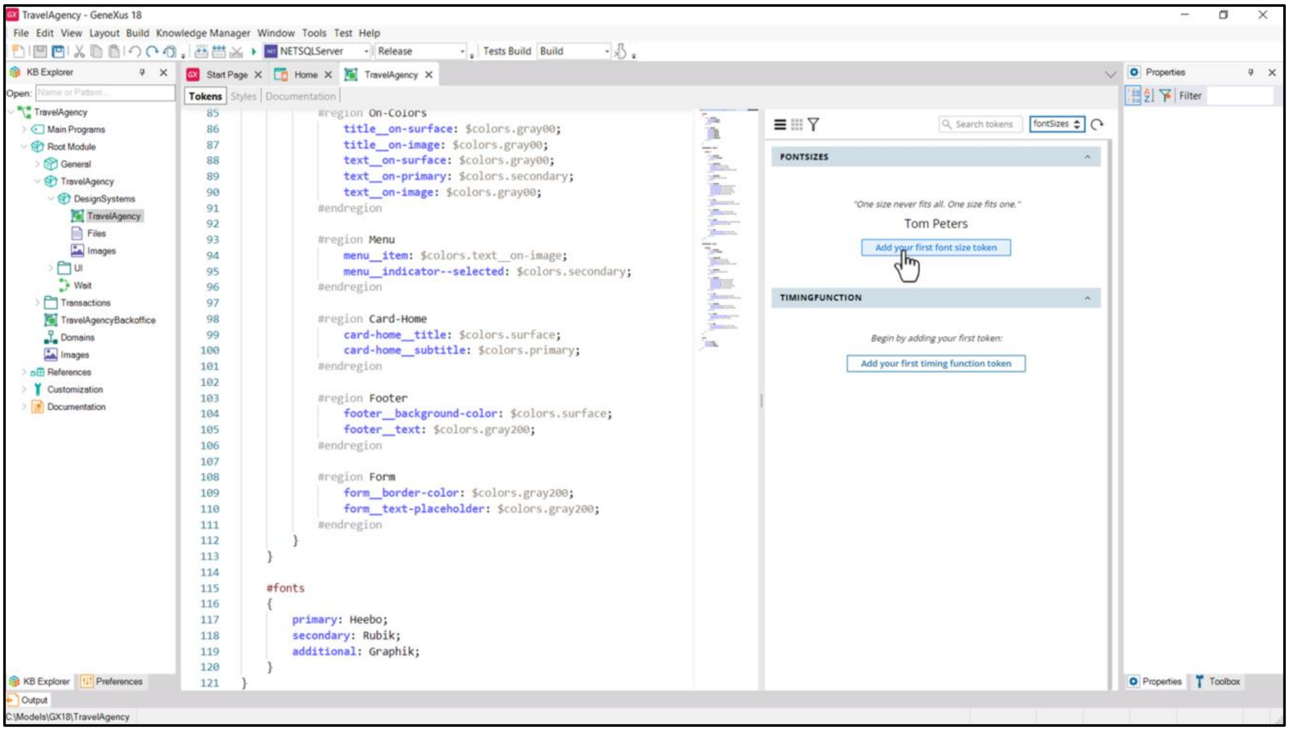
We will work with you to plan a worry free adventure t
needs, expectations and budget. When you plan your
are there throughout the entire process. This means
available to you before, during and after travel.

We plan river and ocean cruises, romantic honeymoo
destinations, family, adventure and wellness travel al
and domestic customized itineraries.

Token	Desktop	Tablet	Phone
XL	100	60	40
L	67	40	20
M	**20**	**16**	**14**
S	16	14	12
XS	14	14	12
card__XL	42	20	15
card__L	23.5	-	-
card-attractions-Big__XL	**36**	36	20
card-attractions-Big__M	38	38	16
card-attractions-Big__S	14	14	12
card-attractions-Small__XL	**36**	20	12
card-attractions-Small__M	38	16	12
card-attractions-Small__S	14	12	10
card-attraction__XL	**36**	23	24
card-attraction__M	38	21	-
form__M	**20**	12	12
form__S	**16**	10	10
banner__XL	36	-	-
banner__L	20	-	-

In the previous video, we didn't take the font size tokens to GeneXus.

We are going to do it only with the Desktop tokens. This means that we will not add the breakpoint option to the set of tokens, as we had seen a couple of videos ago, do you remember? Please bear with me a little bit and you will understand why.



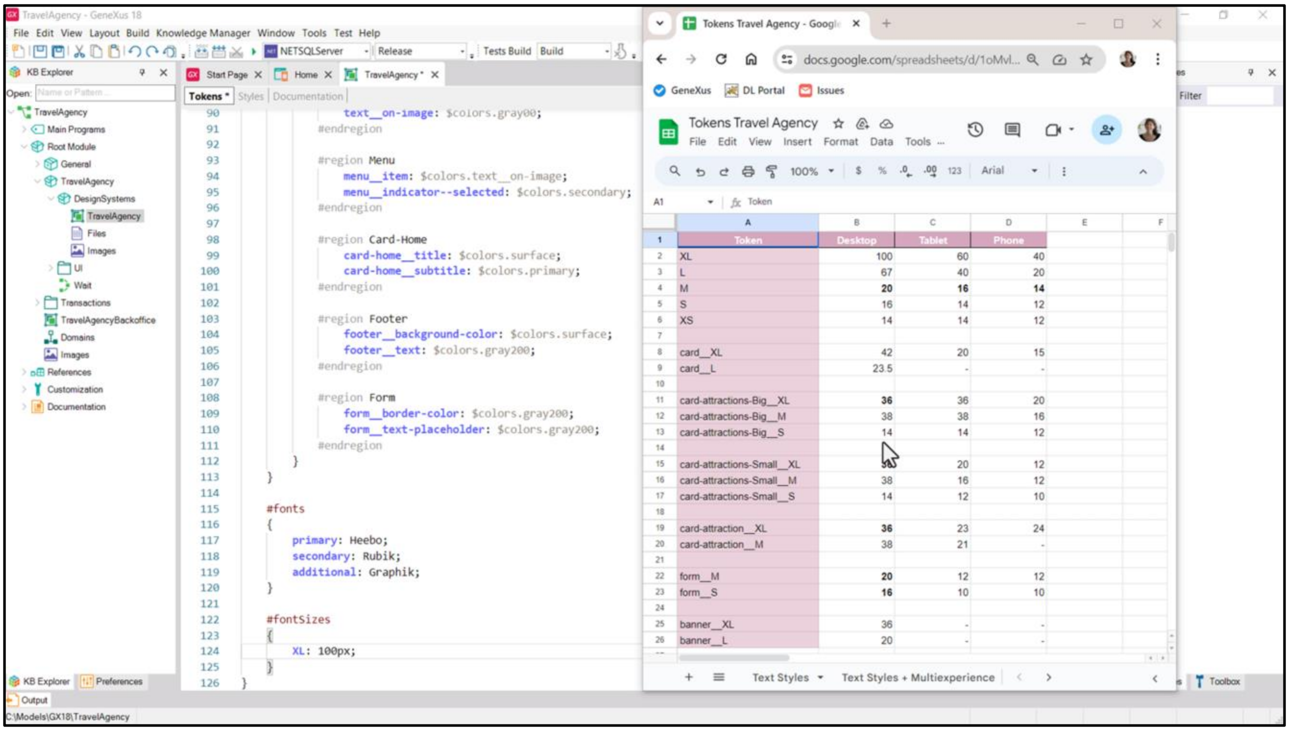
```
            #region On-Colors
                title__on-surface: $colors.gray00;
                title__on-image: $colors.gray00;
                text__on-surface: $colors.gray00;
                text__on-primary: $colors.secondary;
                text__on-image: $colors.gray00;
            #endregion

            #region Menu
                menu__item: $colors.text__on-image;
                menu__indicator--selected: $colors.secondary;
            #endregion

            #region Card-Home
                card-home__title: $colors.surface;
                card-home__subtitle: $colors.primary;
            #endregion

            #region Footer
                footer__background-color: $colors.surface;
                footer__text: $colors.gray200;
            #endregion

            #region Form
                form__border-color: $colors.gray200;
                form__text-placeholder: $colors.gray200;
            #endregion
        }
    }

    #fonts
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }
}
```

"One size never fits all. One size fits one."

Tom Peters

Begin by adding your first token:

If we don't really know the syntax to add tokens for fontSizes, it is convenient to add the first one from the graphical editor. In this way...



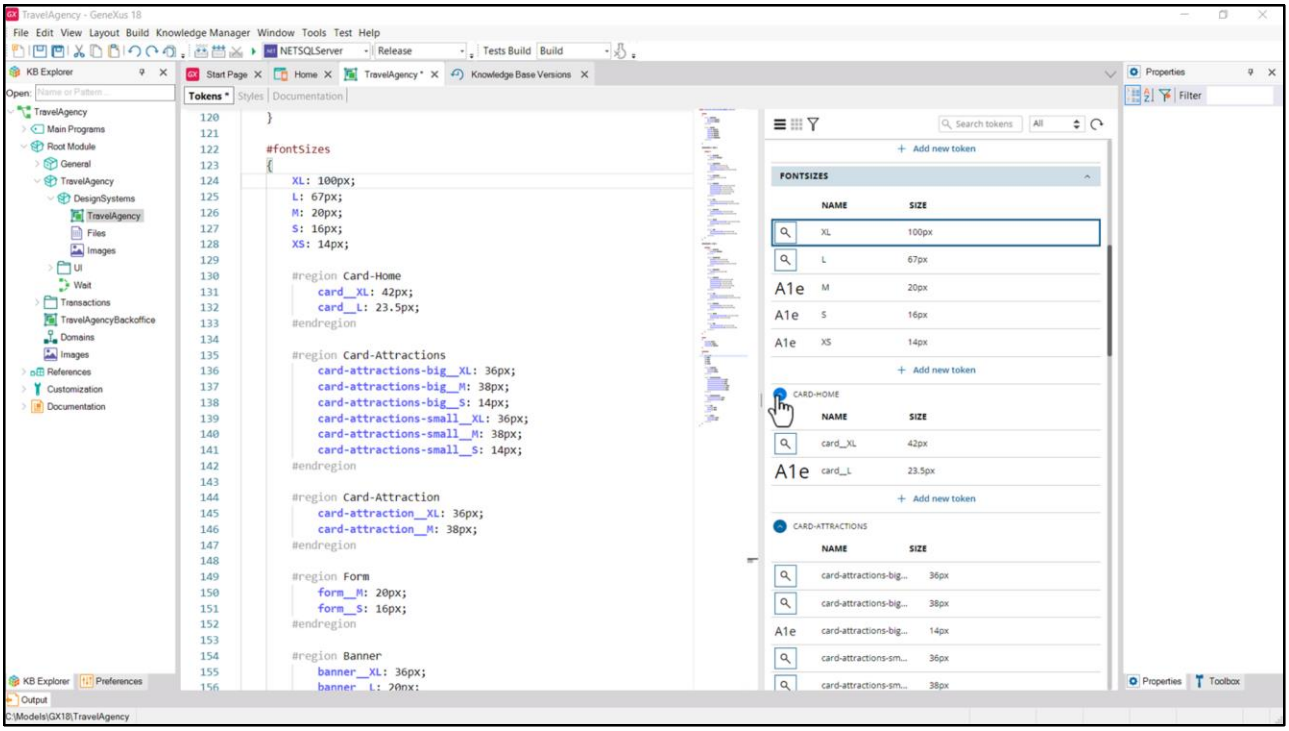
```
            text__on-image: $colors.gray00;
        #endregion

        #region Menu
            menu__item: $colors.text__on-image;
            menu__indicator--selected: $colors.secondary;
        #endregion

        #region Card-Home
            card-home__title: $colors.surface;
            card-home__subtitle: $colors.primary;
        #endregion

        #region Footer
            footer__background-color: $colors.surface;
            footer__text: $colors.gray200;
        #endregion

        #region Form
            form__border-color: $colors.gray200;
            form__text-placeholder: $colors.gray200;
        #endregion
      }
  }

  #fonts
  {
      primary: Heebo;
      secondary: Rubik;
      additional: Graphik;
  }

  #fontSizes
  {
      XL: 100px;
  }
}
```

Tokens Travel Agency

Token	Desktop	Tablet	Phone
XL	100	60	40
L	67	40	20
M	**20**	**16**	**14**
S	16	14	12
XS	14	14	12
card__XL	42	20	15
card__L	23.5	-	-
card-attractions-Big__XL	**36**	36	20
card-attractions-Big__M	38	38	16
card-attractions-Big__S	14	14	12
card-attractions-Small__XL	36	20	12
card-attractions-Small__M	38	16	12
card-attractions-Small__S	14	12	10
card-attraction__XL	**36**	23	24
card-attraction__M	38	21	-
form__M	**20**	12	12
form__S	**16**	10	10
banner__XL	36	-	-
banner__L	20	-	-

And there we can give it the name we want... and the value.

Then, from the final result of the analysis that we had made in the previous video and that was expressed in this spreadsheet, we can enter these tokens. As I said, I will only use the values for Desktop in this DSO.



```
    }

    #fontSizes
    {
        XL: 100px;
        L: 67px;
        M: 20px;
        S: 16px;
        XS: 14px;

        #region Card-Home
            card__XL: 42px;
            card__L: 23.5px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 36px;
            card-attractions-big__M: 38px;
            card-attractions-big__S: 14px;
            card-attractions-small__XL: 36px;
            card-attractions-small__M: 38px;
            card-attractions-small__S: 14px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 36px;
            card-attraction__M: 38px;
        #endregion

        #region Form
            form__M: 20px;
            form__S: 16px;
        #endregion

        #region Banner
            banner__XL: 36px;
            banner__L: 20px;
```

FONTSIZES

	NAME	SIZE
	XL	100px
	L	67px
A1e	M	20px
A1e	S	16px
A1e	XS	14px

CARD-HOME

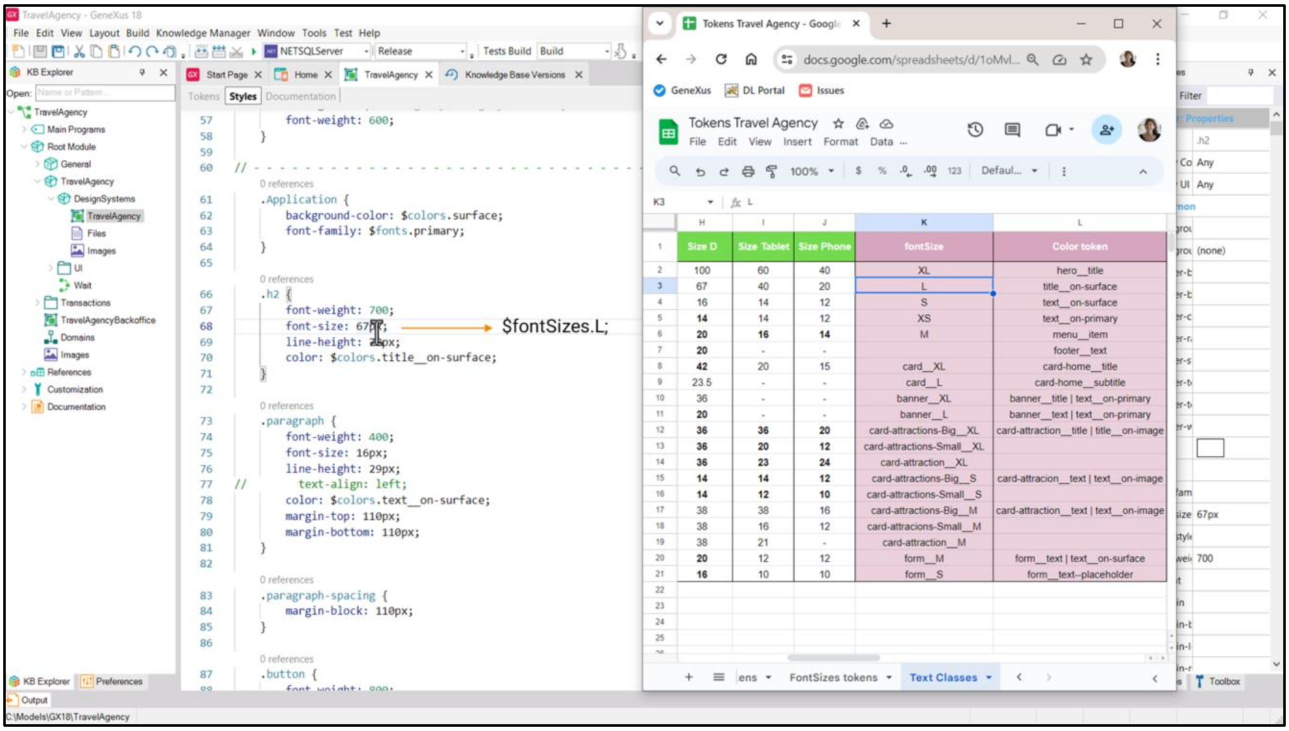
	NAME	SIZE
	card__XL	42px
A1e	card__L	23.5px

CARD-ATTRACTIONS

	NAME	SIZE
	card-attractions-big...	36px
	card-attractions-big...	38px
A1e	card-attractions-big...	14px
	card-attractions-sm...	36px
	card-attractions-sm...	38px

Here I copied them all, placing regions, as before, for organization purposes. We can see, in the graphical editor, the information represented like this.

Next, we should take the opportunity to change, in the classes we have already defined, all the font-size properties so that they now use the appropriate font size token.



```
    font-weight: 600;
}

// - - - - - - - - - - - - - - - - - - - - - - - - -
0 references
.Application {
    background-color: $colors.surface;
    font-family: $fonts.primary;
}

0 references
.h2 {
    font-weight: 700;
    font-size: 67px;
    line-height: [illegible]px;
    color: $colors.title__on-surface;
}

0 references
.paragraph {
    font-weight: 400;
    font-size: 16px;
    line-height: 29px;
//      text-align: left;
    color: $colors.text__on-surface;
    margin-top: 110px;
    margin-bottom: 110px;
}

0 references
.paragraph-spacing {
    margin-block: 110px;
}

0 references
.button {
```

$fontSizes.L;

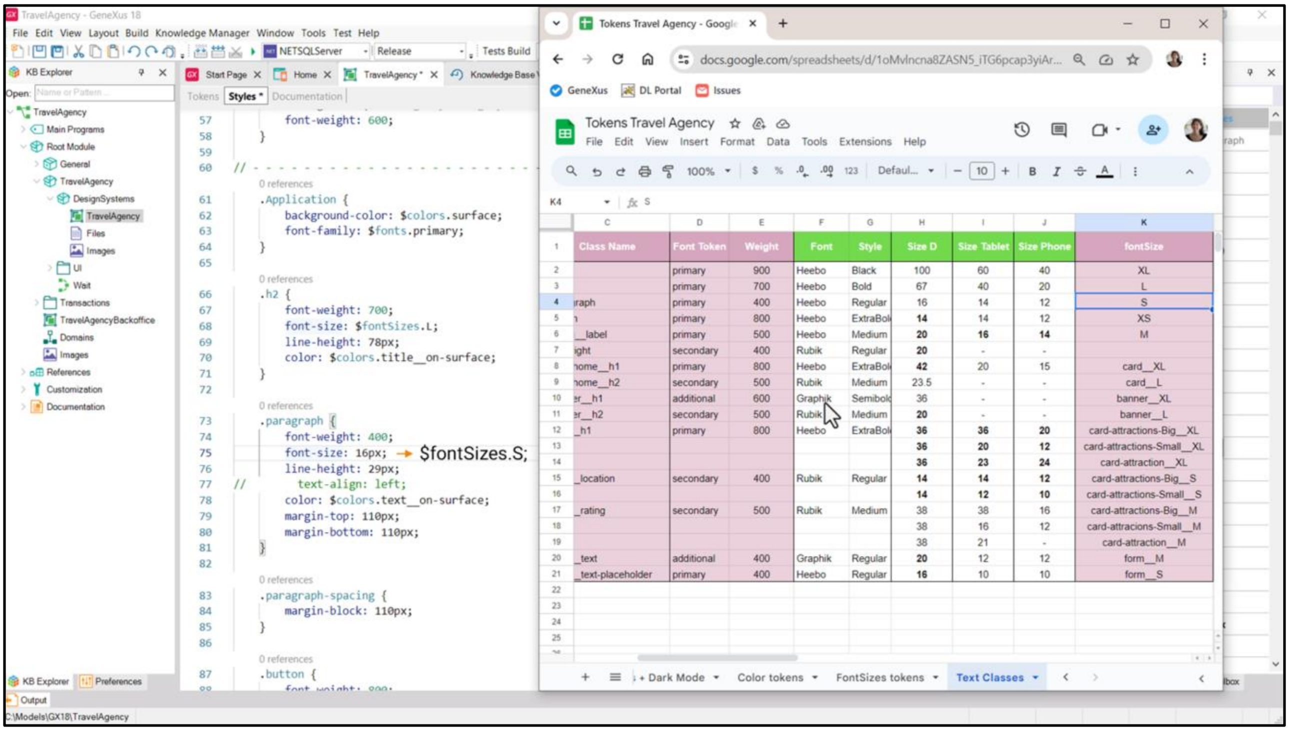
Tokens Travel Agency

K3 fx L

Size D	Size Tablet	Size Phone	fontSize	Color token
100	60	40	XL	hero__title
67	40	20	L	title__on-surface
16	14	12	S	text__on-surface
14	14	12	XS	text__on-primary
20	**16**	**14**	M	menu__item
20	-	-		footer__text
42	20	15	card__XL	card-home__title
23.5	-	-	card__L	card-home__subtitle
36	-	-	banner__XL	banner__title | text__on-primary
20	-	-	banner__L	banner__text | text__on-primary
36	**36**	**20**	card-attractions-Big__XL	card-attraction__title | title__on-image
36	**20**	**12**	card-attractions-Small__XL	
36	**23**	**24**	card-attraction__XL	
14	**14**	**12**	card-attractions-Big__S	card-attracion__text | text__on-image
14	**12**	**10**	card-attractions-Small__S	
38	38	16	card-attractions-Big__M	card-attraction__text | text__on-image
38	16	12	card-attracions-Small__M	
38	21	-	card-attraction__M	
20	12	12	form__M	form__text | text__on-surface
16	10	10	form__S	form__text--placeholder

In this way, if we look in our spreadsheet, in the tab where we had the text classes, the token for h2... it was named L.

So here we type the dollar sign to refer to a token, of type fontSizes and name L.

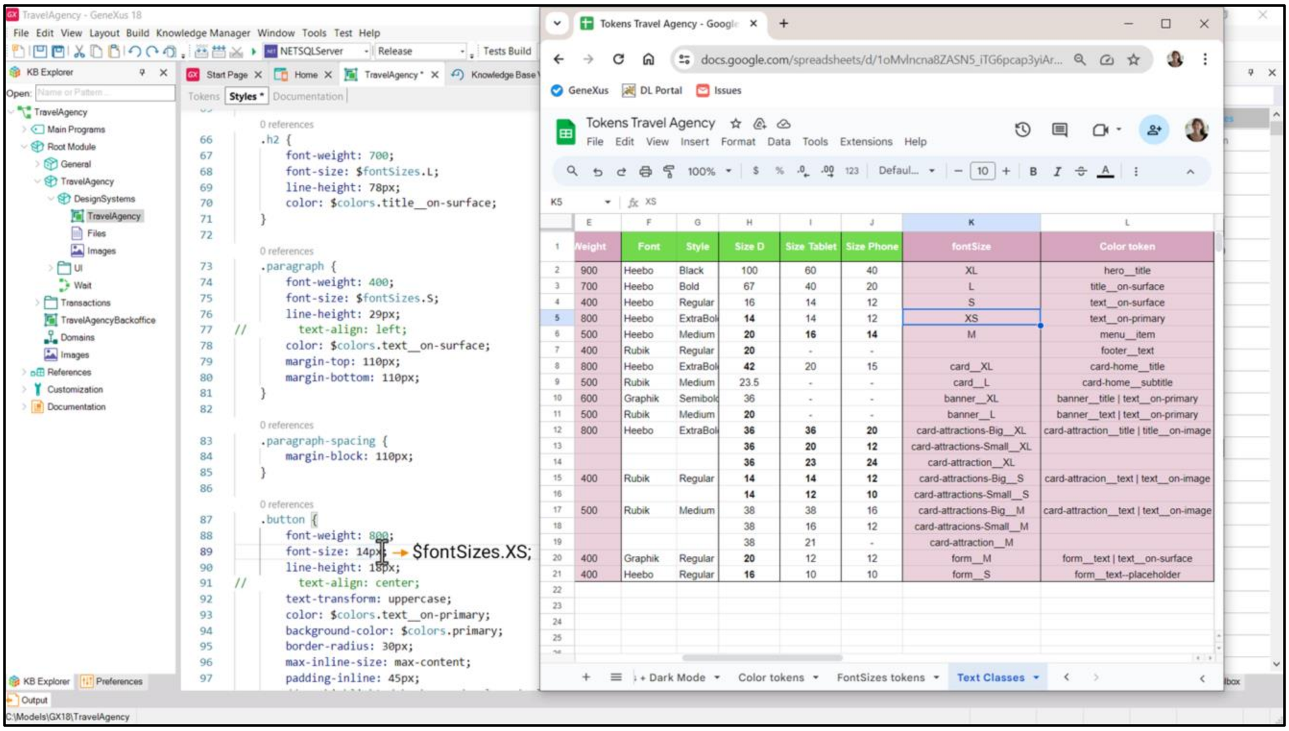


```
        font-weight: 600;
    }

//  - - - - - - - - - - - - - - - - - - - - - - - -
    0 references
    .Application {
        background-color: $colors.surface;
        font-family: $fonts.primary;
    }

    0 references
    .h2 {
        font-weight: 700;
        font-size: $fontSizes.L;
        line-height: 78px;
        color: $colors.title__on-surface;
    }

    0 references
    .paragraph {
        font-weight: 400;
        font-size: 16px; → $fontSizes.S;
        line-height: 29px;
//        text-align: left;
        color: $colors.text__on-surface;
        margin-top: 110px;
        margin-bottom: 110px;
    }

    0 references
    .paragraph-spacing {
        margin-block: 110px;
    }

    0 references
    .button {
        font-weight: 900;
```

	C	D	E	F	G	H	I	J	K
1	Class Name	Font Token	Weight	Font	Style	Size D	Size Tablet	Size Phone	fontSize
2		primary	900	Heebo	Black	100	60	40	XL
3		primary	700	Heebo	Bold	67	40	20	L
4	ıraph	primary	400	Heebo	Regular	16	14	12	S
5	ı	primary	800	Heebo	ExtraBol	14	14	12	XS
6	__label	primary	500	Heebo	Medium	20	16	14	M
7	ight	secondary	400	Rubik	Regular	20	-	-	
8	ome__h1	primary	800	Heebo	ExtraBol	42	20	15	card__XL
9	ome__h2	secondary	500	Rubik	Medium	23.5	-	-	card__L
10	er__h1	additional	600	Graphik	Semibolc	36	-	-	banner__XL
11	er__h2	secondary	500	Rubik	Medium	20	-	-	banner__L
12	_h1	primary	800	Heebo	ExtraBol	36	36	20	card-attractions-Big__XL
13						36	20	12	card-attractions-Small__XL
14						36	23	24	card-attraction__XL
15	_location	secondary	400	Rubik	Regular	14	14	12	card-attractions-Big__S
16						14	12	10	card-attractions-Small__S
17	_rating	secondary	500	Rubik	Medium	38	38	16	card-attractions-Big__M
18						38	16	12	card-attracions-Small__M
19						38	21	-	card-attraction__M
20	_text	additional	400	Graphik	Regular	20	12	12	form__M
21	_text-placeholder	primary	400	Heebo	Regular	16	10	10	form__S

Then we look for the token for the paragraph class... it is the one named S.

So we replace it with... fontSizes S.



```
.h2 {
    font-weight: 700;
    font-size: $fontSizes.L;
    line-height: 78px;
    color: $colors.title__on-surface;
}

.paragraph {
    font-weight: 400;
    font-size: $fontSizes.S;
    line-height: 29px;
//    text-align: left;
    color: $colors.text__on-surface;
    margin-top: 110px;
    margin-bottom: 110px;
}

.paragraph-spacing {
    margin-block: 110px;
}

.button {
    font-weight: 800;
    font-size: 14px;
    line-height: 18px;
//    text-align: center;
    text-transform: uppercase;
    color: $colors.text__on-primary;
    background-color: $colors.primary;
    border-radius: 30px;
    max-inline-size: max-content;
    padding-inline: 45px;
```

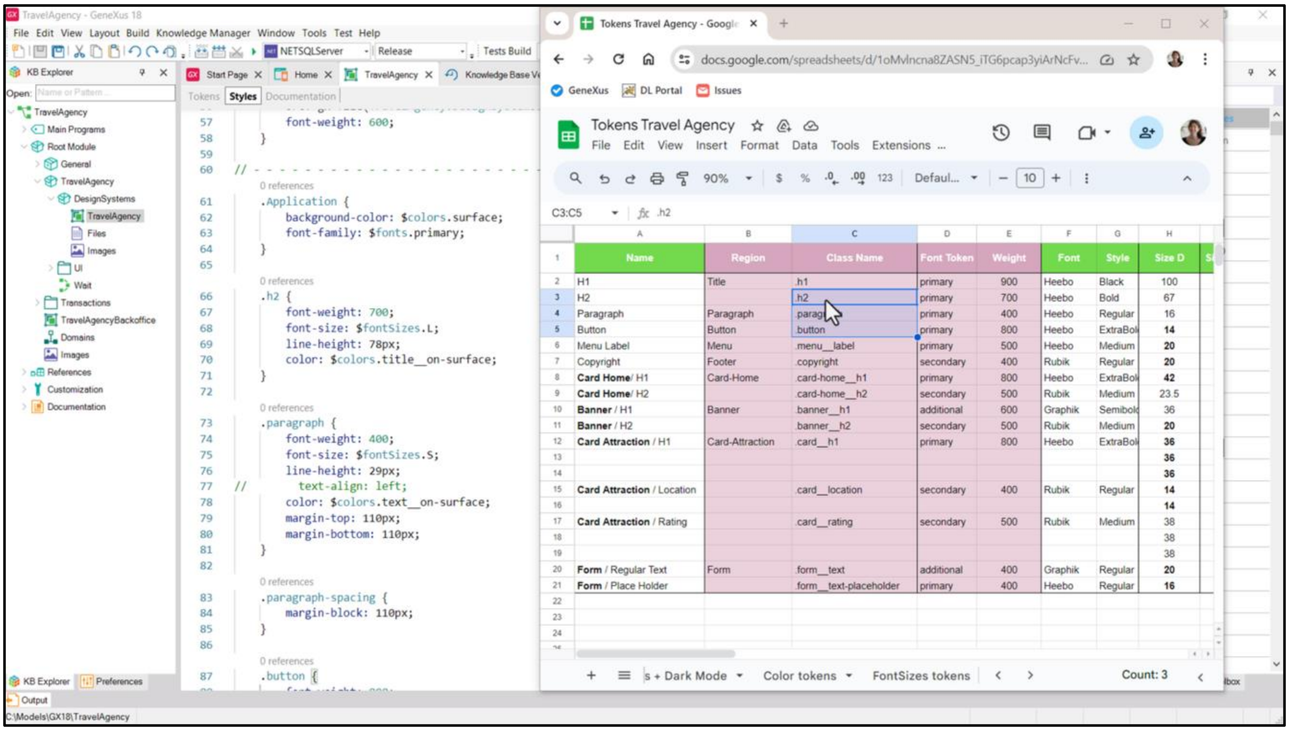
→ $fontSizes.XS;

Tokens Travel Agency

K5 fx XS

	E	F	G	H	I	J	K	L
1	Weight	Font	Style	Size D	Size Tablet	Size Phone	fontSize	Color token
2	900	Heebo	Black	100	60	40	XL	hero__title
3	700	Heebo	Bold	67	40	20	L	title__on-surface
4	400	Heebo	Regular	16	14	12	S	text__on-surface
5	800	Heebo	ExtraBol	14	14	12	XS	text__on-primary
6	500	Heebo	Medium	20	16	14	M	menu__item
7	400	Rubik	Regular	20	-	-		footer__text
8	800	Heebo	ExtraBol	42	20	15	card__XL	card-home__title
9	500	Rubik	Medium	23.5	-	-	card__L	card-home__subtitle
10	600	Graphik	Semibol	36	-	-	banner__XL	banner__title | text__on-primary
11	500	Rubik	Medium	20	-	-	banner__L	banner__text | text__on-primary
12	800	Heebo	ExtraBol	36	36	20	card-attractions-Big__XL	card-attraction__title | title__on-image
13				36	20	12	card-attractions-Small__XL	
14				36	23	24	card-attraction__XL	
15	400	Rubik	Regular	14	14	12	card-attractions-Big__S	card-attracion__text | text__on-image
16				14	12	10	card-attractions-Small__S	
17	500	Rubik	Medium	38	38	16	card-attractions-Big__M	card-attraction__text | text__on-image
18				38	16	12	card-attracions-Small__M	
19				38	21	-	card-attraction__M	
20	400	Graphik	Regular	20	12	12	form__M	form__text | text__on-surface
21	400	Heebo	Regular	16	10	10	form__S	form__text--placeholder

And all that's left is the button class... which will be XS.



```
        font-weight: 600;
    }

//  - - - - - - - - - - - - - - - - - - - - - - - - - - -
    .Application {
        background-color: $colors.surface;
        font-family: $fonts.primary;
    }

    .h2 {
        font-weight: 700;
        font-size: $fontSizes.L;
        line-height: 78px;
        color: $colors.title__on-surface;
    }

    .paragraph {
        font-weight: 400;
        font-size: $fontSizes.S;
        line-height: 29px;
//          text-align: left;
        color: $colors.text__on-surface;
        margin-top: 110px;
        margin-bottom: 110px;
    }

    .paragraph-spacing {
        margin-block: 110px;
    }

    .button {
```

Tokens Travel Agency

C3:C5 fx .h2

	Name	Region	Class Name	Font Token	Weight	Font	Style	Size D
2	H1	Title	.h1	primary	900	Heebo	Black	100
3	H2		.h2	primary	700	Heebo	Bold	67
4	Paragraph	Paragraph	.parag	primary	400	Heebo	Regular	16
5	Button	Button	.button	primary	800	Heebo	ExtraBol	**14**
6	Menu Label	Menu	.menu__label	primary	500	Heebo	Medium	**20**
7	Copyright	Footer	.copyright	secondary	400	Rubik	Regular	**20**
8	**Card Home**/ H1	Card-Home	.card-home__h1	primary	800	Heebo	ExtraBol	**42**
9	**Card Home**/ H2		.card-home__h2	secondary	500	Rubik	Medium	23.5
10	**Banner** / H1	Banner	.banner__h1	additional	600	Graphik	Semibol	36
11	**Banner** / H2		.banner__h2	secondary	500	Rubik	Medium	**20**
12	**Card Attraction** / H1	Card-Attraction	.card__h1	primary	800	Heebo	ExtraBol	**36**
13								**36**
14								**36**
15	**Card Attraction** / Location		.card__location	secondary	400	Rubik	Regular	**14**
16								**14**
17	**Card Attraction** / Rating		.card__rating	secondary	500	Rubik	Medium	38
18								38
19								38
20	**Form** / Regular Text	Form	.form__text	additional	400	Graphik	Regular	**20**
21	**Form** / Place Holder		.form__text-placeholder	primary	400	Heebo	Regular	**16**

Remember that we only have these three classes because, for learning purposes, we had already been working on them in the previous module, in great detail, so that you could get a feel of all this and understand what it's all about.

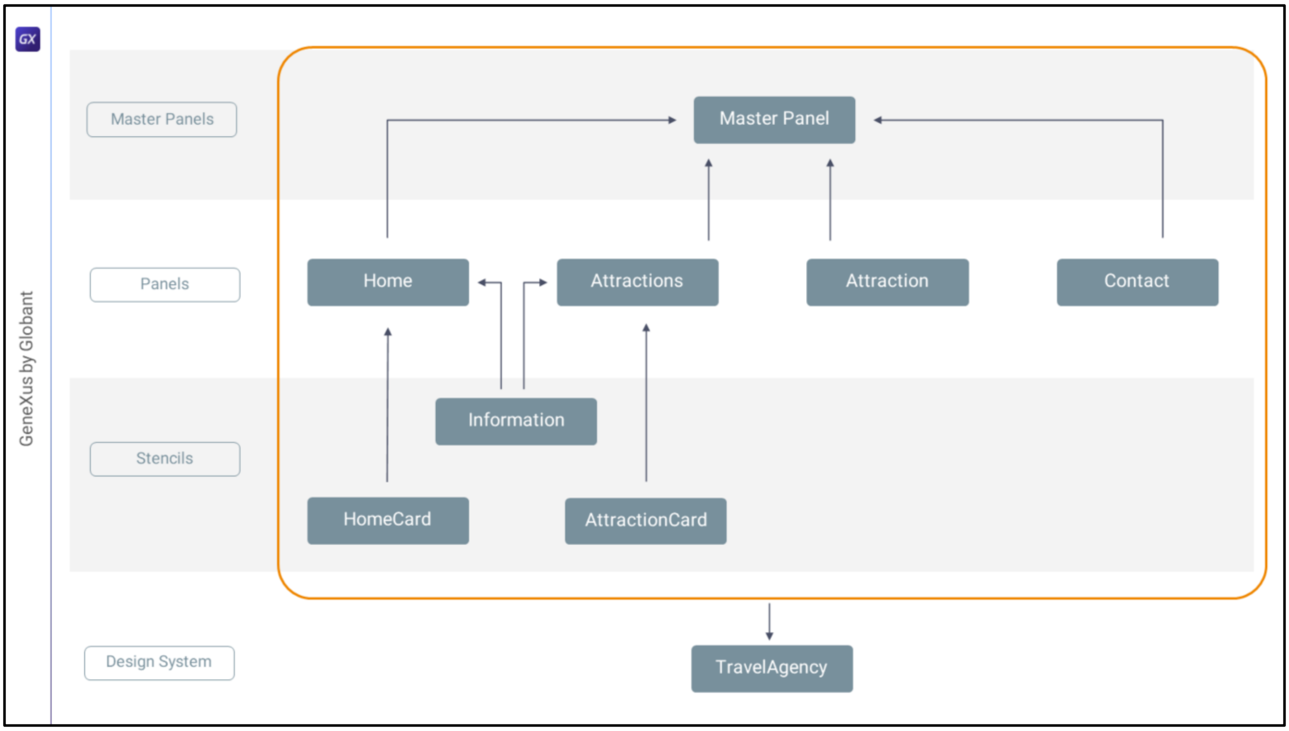
But when we already know all that and we have to start working on a project, in general we do what we have been doing in this module: enter the assets first, that is, the resources (images, fonts... and in this case also include them in the DSO with the font-face rules); everything we have been doing at the beginning of this module...

...set up the color system, font size system. And also spacing, radii, borders (we will not do it here, so as not to make it boring, because it is the same type of analysis that we have already done for colors and font sizes). We would add, then, also those tokens to use them in the corresponding properties...

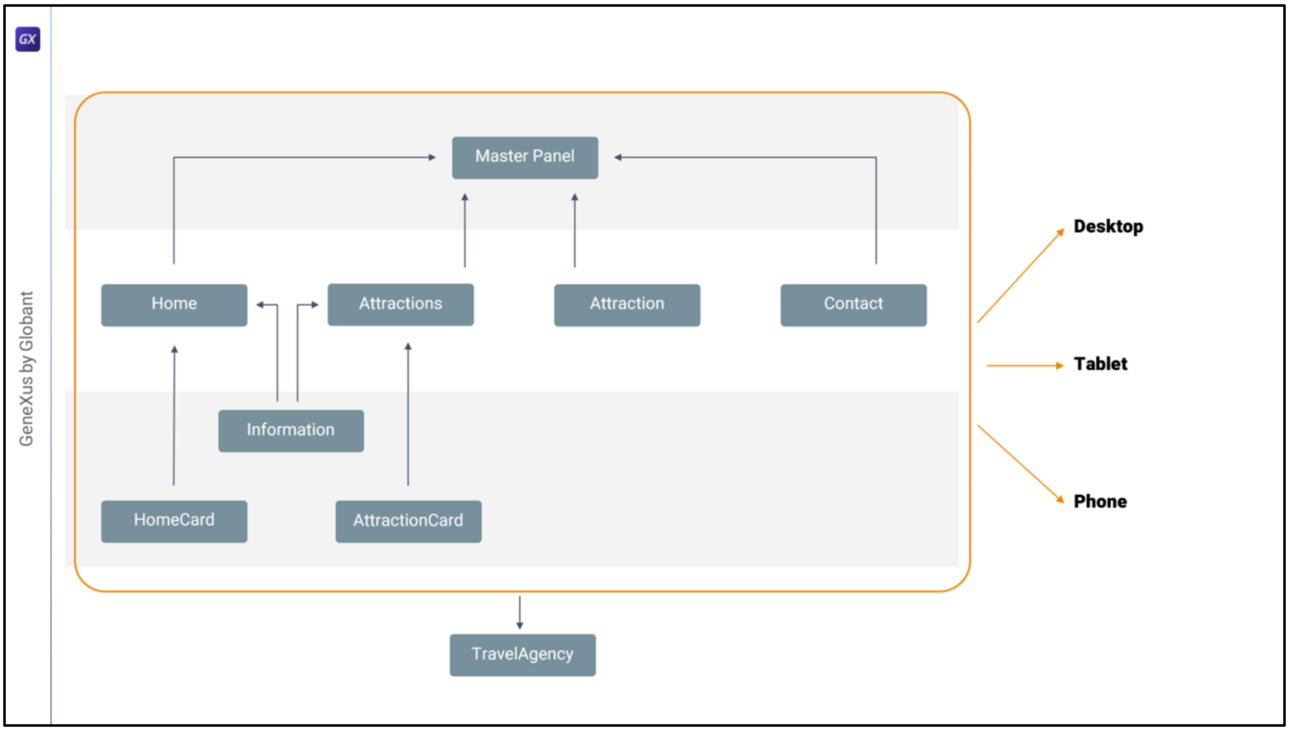
And after all that, we would enter all these text classes that we have already identified (not only the 3 that we have already entered but all of them) so that when we start working on the objects individually, we don't have to dwell on more obvious things, like these, and we can focus on the actual problem. We will do it in the next video.

Now to finish this video I just want to mention, so that this is not a mystery, why I didn't add a breakpoint option to vary the tokens by screen size.

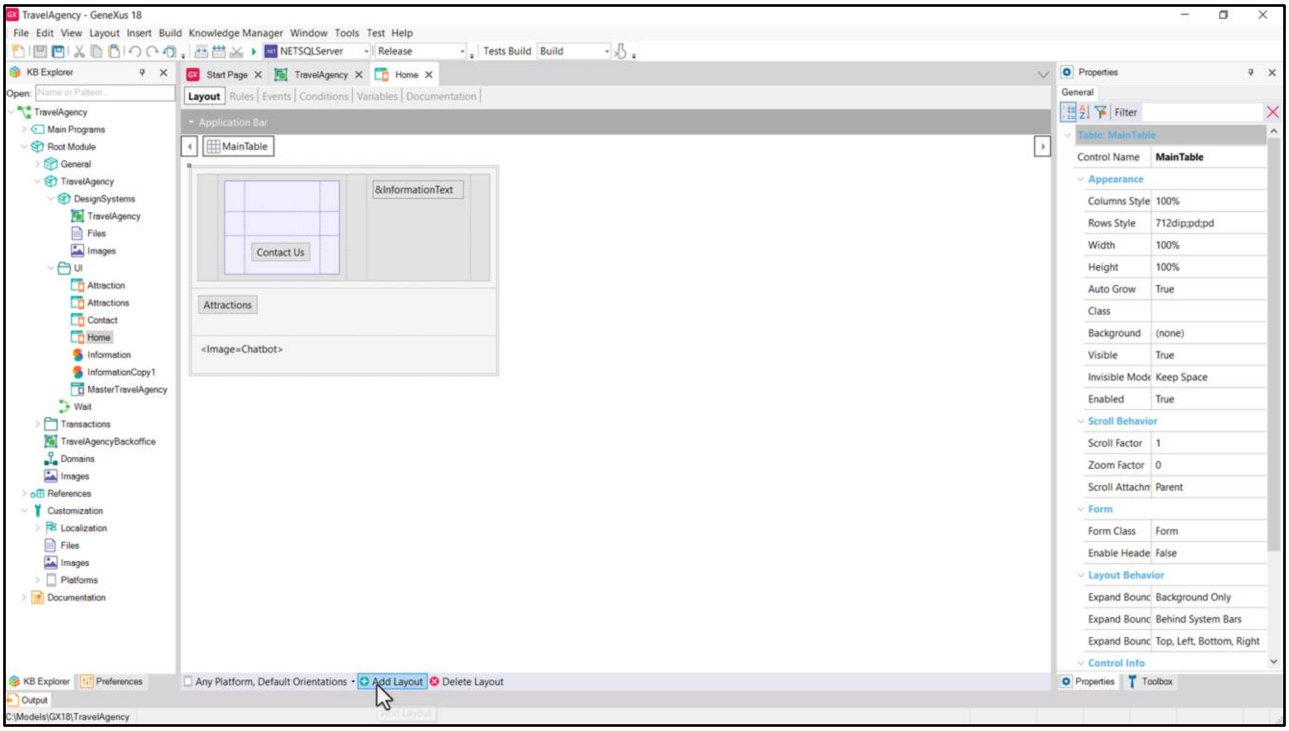
This one that I'm going to use is a possible option among several. It is not the only one.
I will think of the different screen sizes as different versions of the same concept: the Design System for the application.



Do you remember that in a class very early on where we had analyzed all the players, we had separated things like this? Here are all the objects that were going to implement the User Interface... and here is the Design System object.

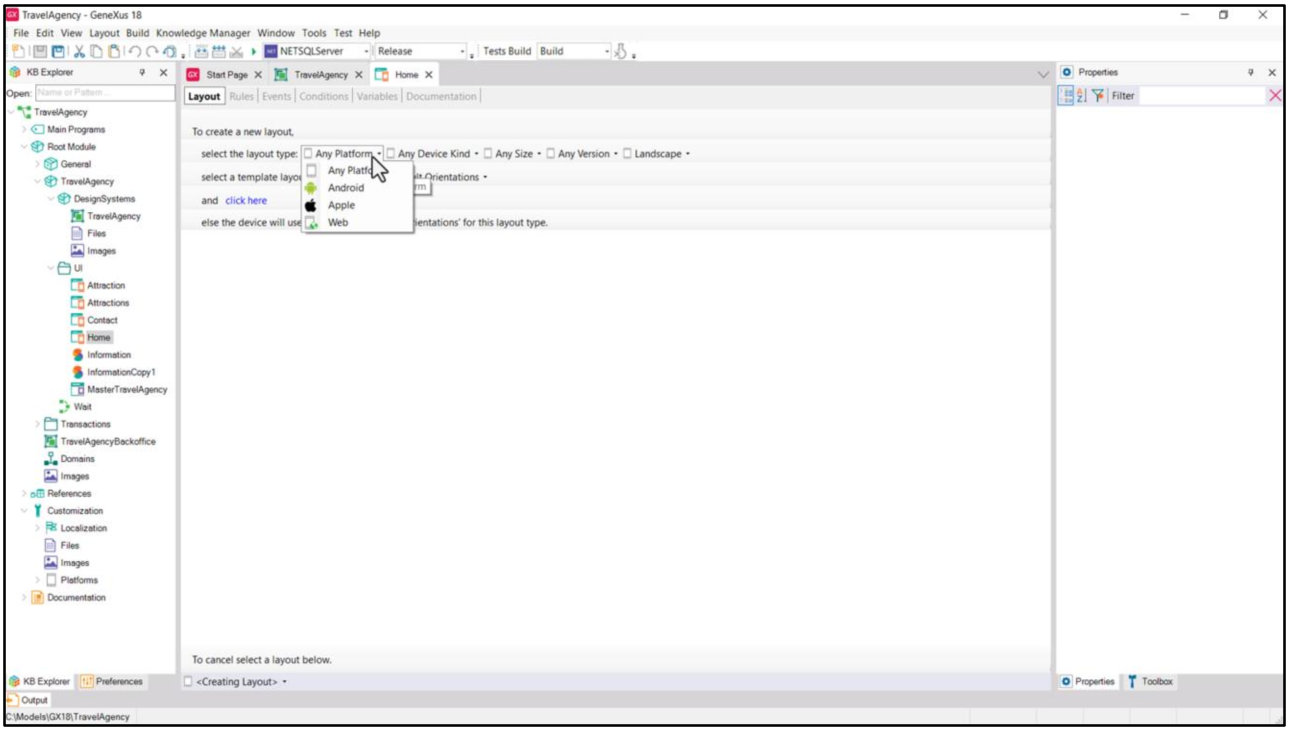


Well, it turns out that all these objects with a layout will be able to define different versions of the layout according to the platform...



Control Name	MainTable
Appearance	
Columns Style	100%
Rows Style	712dip;pd;pd
Width	100%
Height	100%
Auto Grow	True
Class	
Background	(none)
Visible	True
Invisible Mode	Keep Space
Enabled	True
Scroll Behavior	
Scroll Factor	1
Zoom Factor	0
Scroll Attachm	Parent
Form	
Form Class	Form
Enable Heade	False
Layout Behavior	
Expand Bounc	Background Only
Expand Bounc	Behind System Bars
Expand Bounc	Top, Left, Bottom, Right
Control Info	

Take the Home panel, for example. At the moment it only has one layout defined, which is valid for all platforms in all orientations. We could add other, specific layouts to it.



To create a new layout,

select the layout type: □ Any Platform ▾ □ Any Device Kind ▾ □ Any Size ▾ □ Any Version ▾ □ Landscape ▾

select a template layou ... ...lt Orientations ▾

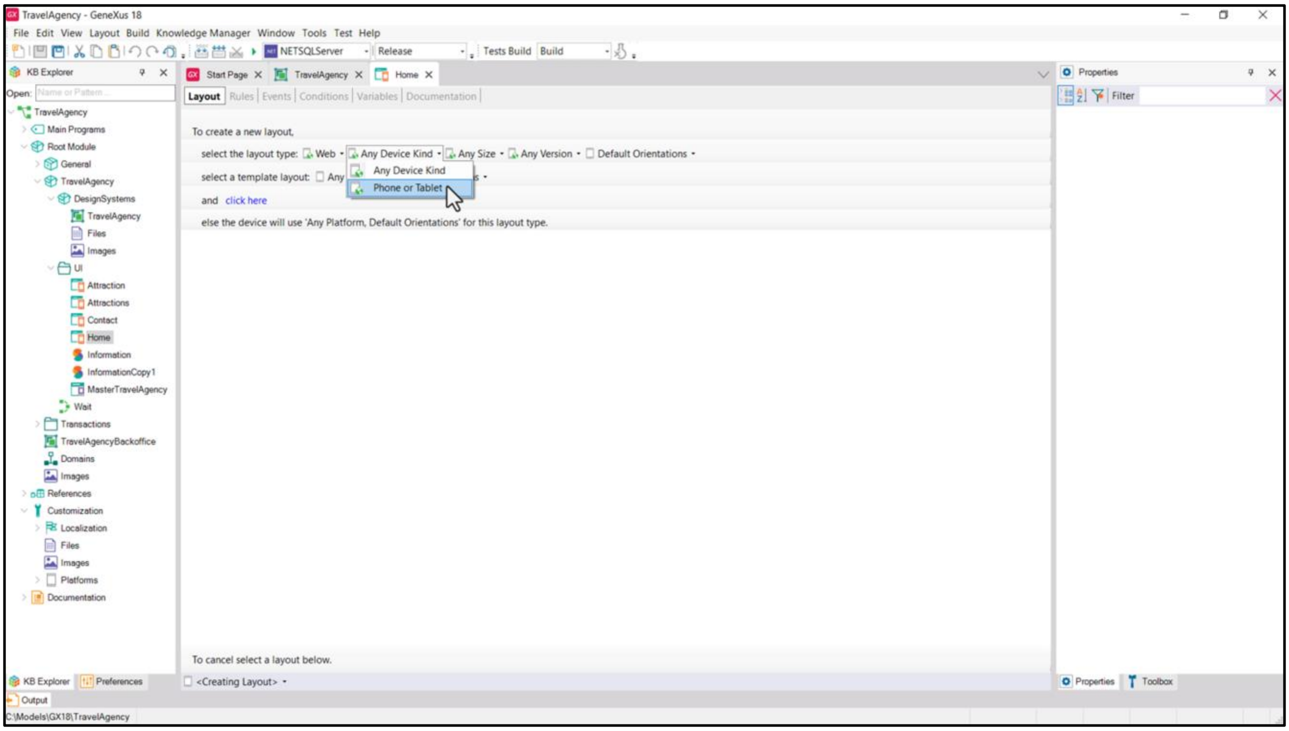
and click here

else the device will use ... ...ientations' for this layout type.

To cancel select a layout below.

□ <Creating Layout> ▾

For example, to differentiate by platform: Web, Android or Apple.



To create a new layout,

select the layout type: Web ▾ Any Device Kind ▾ Any Size ▾ Any Version ▾ □ Default Orientations ▾

Any Device Kind
Phone or Tablet

select a template layout: □ Any

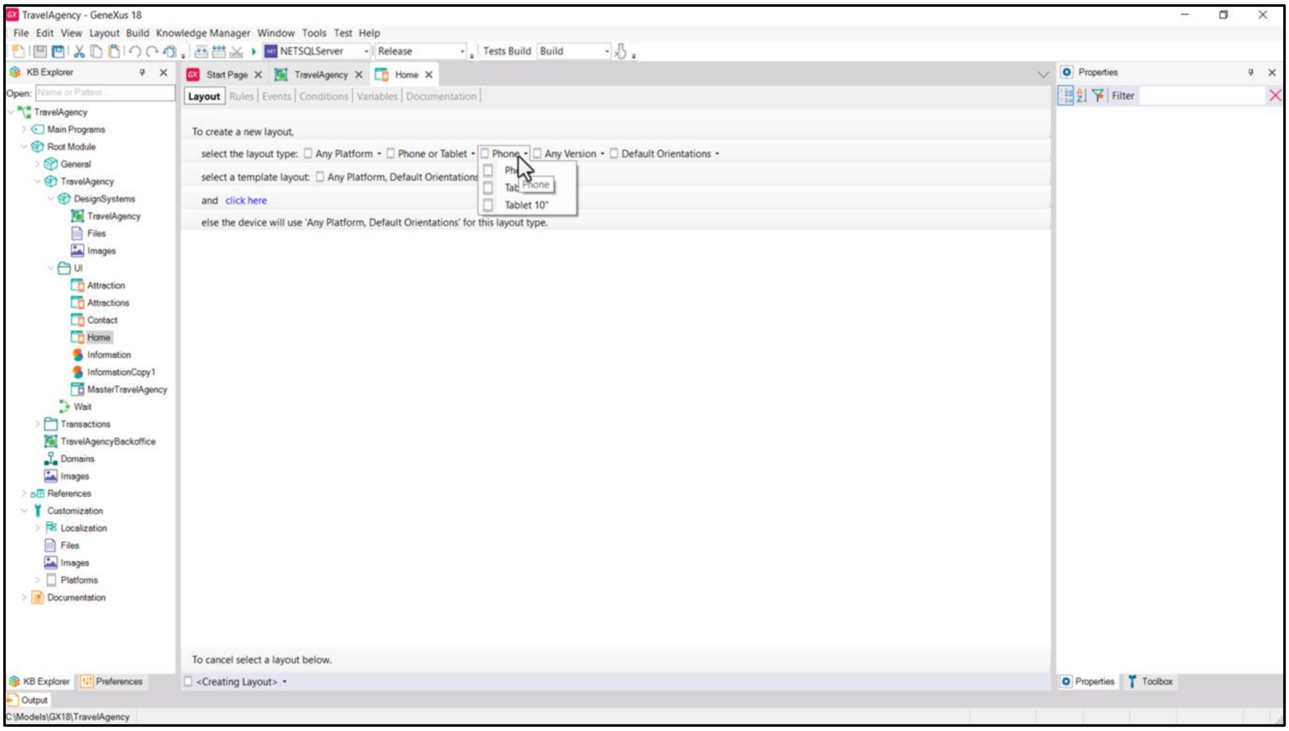
and click here

else the device will use 'Any Platform, Default Orientations' for this layout type.

To cancel select a layout below.

□ <Creating Layout> ▾

I choose Web, and I can also specify if it is Web for any type of device, or for Phone or Tablet.



To create a new layout,

select the layout type: □ Any Platform • □ Phone or Tablet • □ Phone • □ Any Version • □ Default Orientations •

□ Ph
□ Tab
□ Tablet 10"

Phone

select a template layout: □ Any Platform, Default Orientations

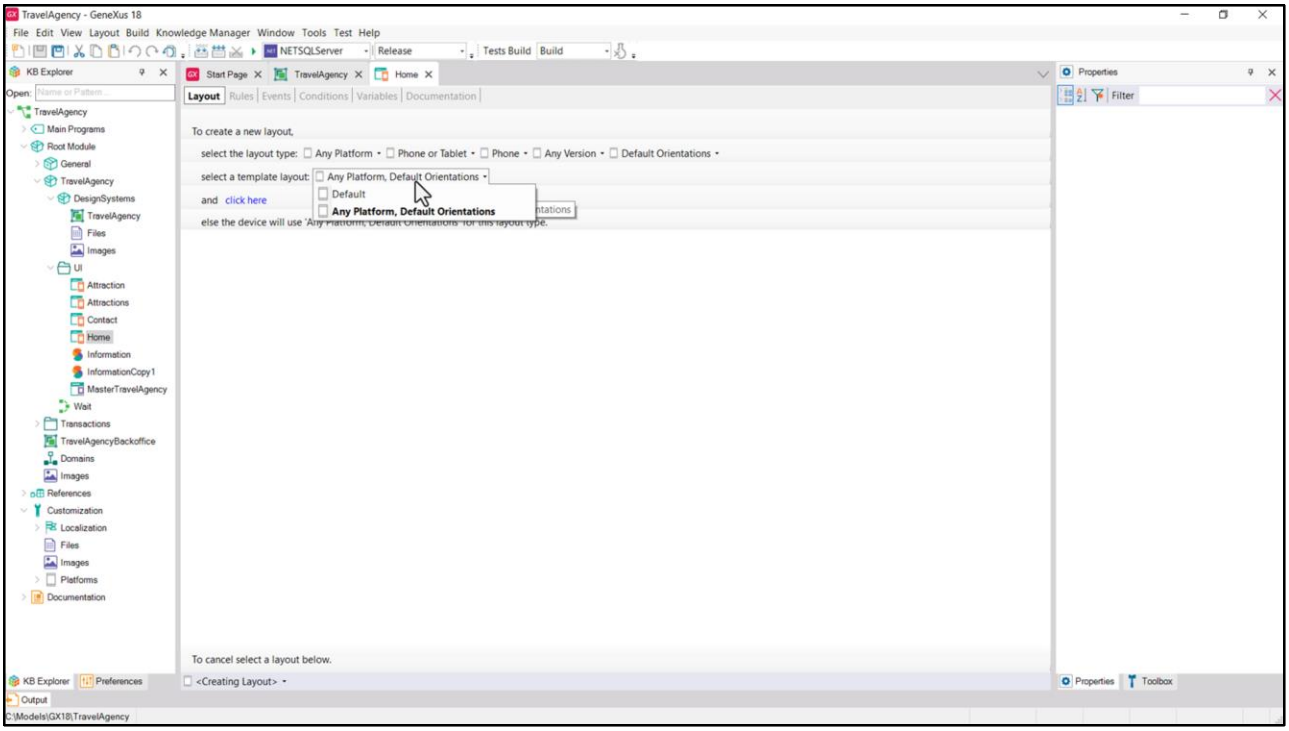
and click here

else the device will use 'Any Platform, Default Orientations' for this layout type.

To cancel select a layout below.

□ <Creating Layout> •

Or, for example, I can add a new layout that is valid for any platform (native or web) but for Phone or Tablet size. And here choose if it will be Phone or Tablet (7 or 10 inches)... and so on.



To create a new layout,

select the layout type: □ Any Platform • □ Phone or Tablet • □ Phone • □ Any Version • □ Default Orientations •

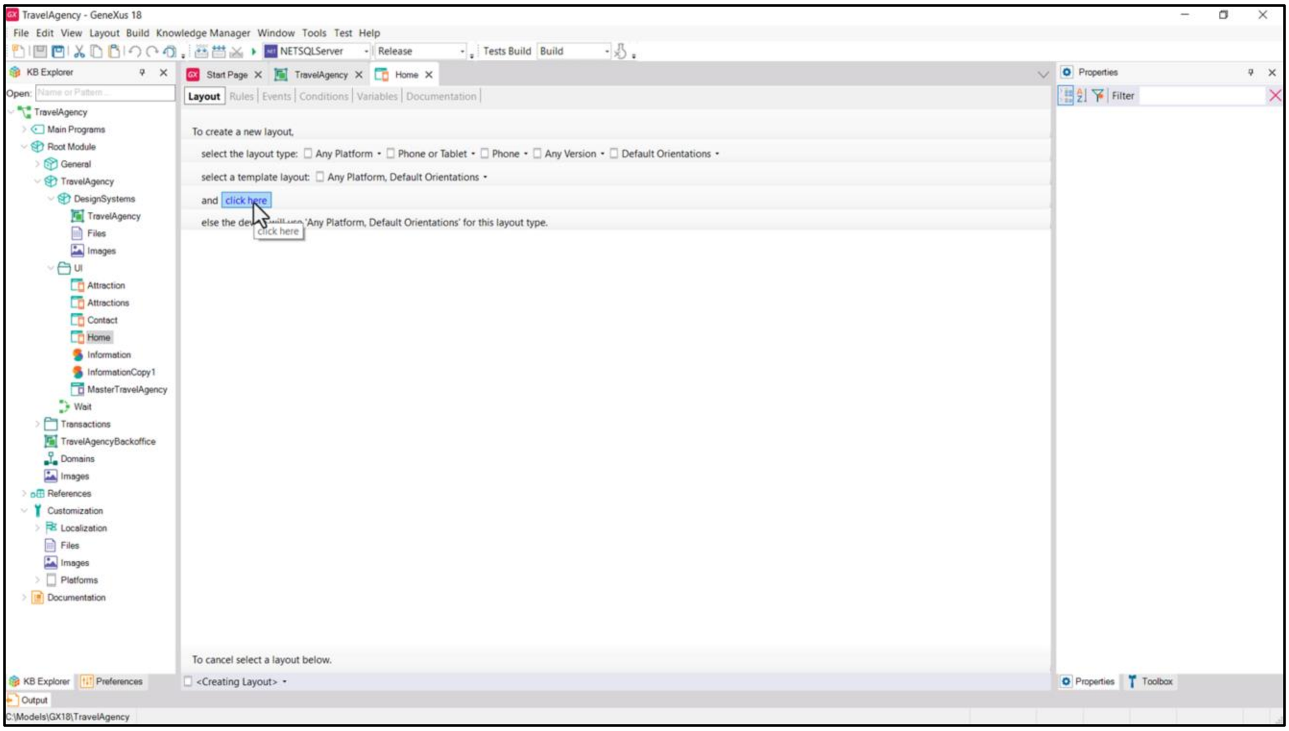
select a template layout: □ Any Platform, Default Orientations •

and click here

else the device will use 'Any Platform, Default Orientations' for this layout type.

To cancel select a layout below.

For example, if I choose Phone and I want to initialize the layout with this one, which is the only one we have so far...



To create a new layout,

select the layout type: □ Any Platform ▾ □ Phone or Tablet ▾ □ Phone ▾ □ Any Version ▾ □ Default Orientations ▾

select a template layout: □ Any Platform, Default Orientations ▾

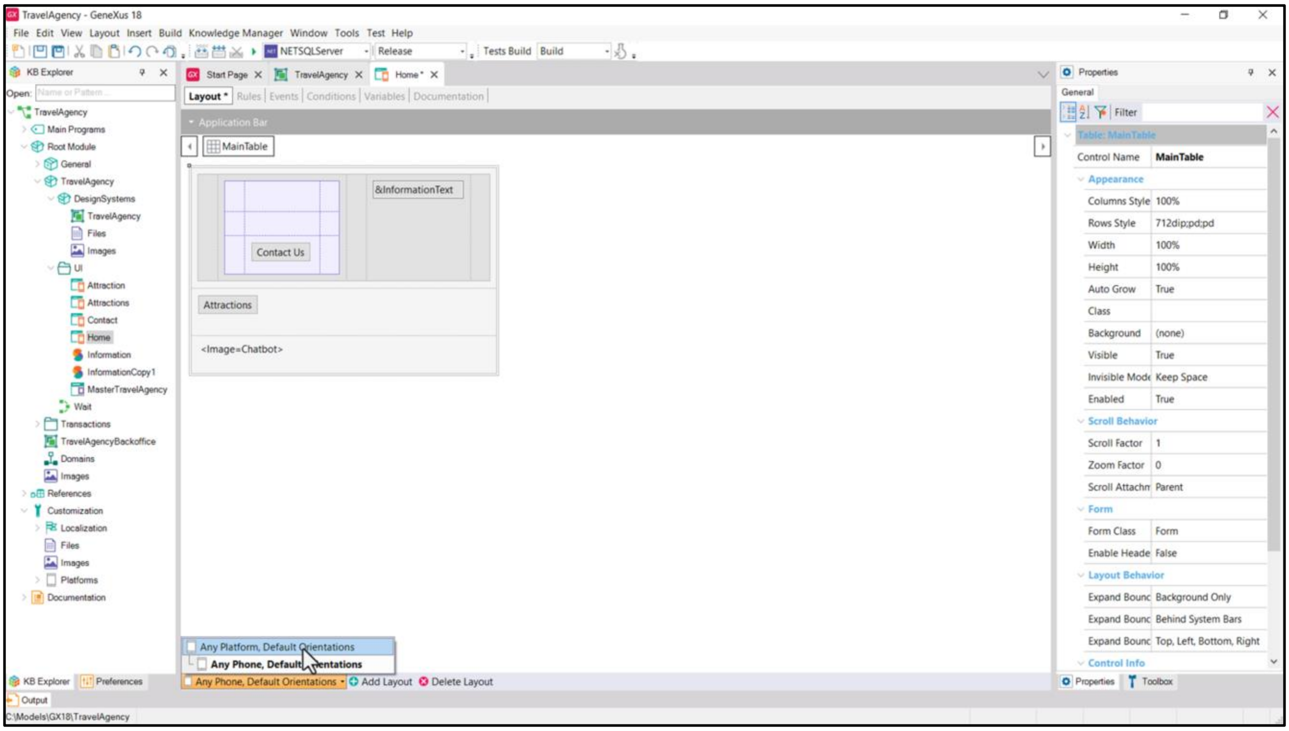
and click here

else the dev[illegible] will use 'Any Platform, Default Orientations' for this layout type.

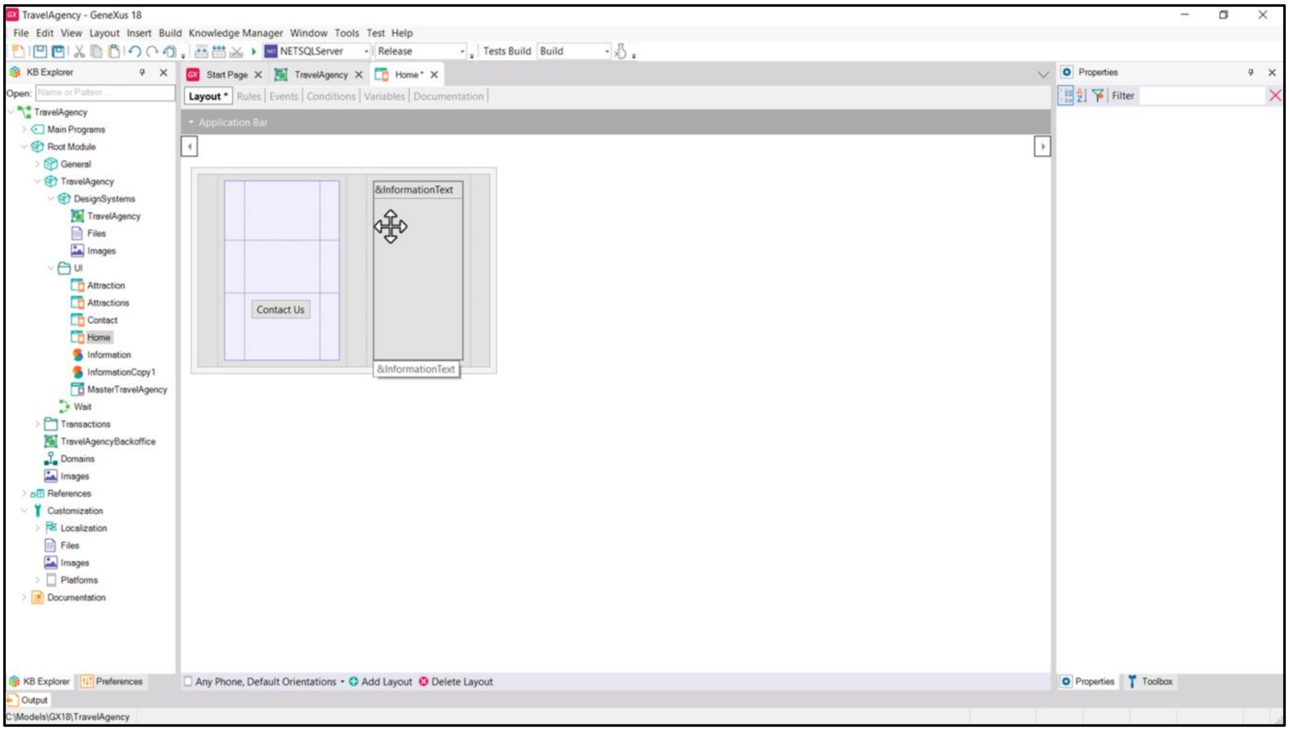
To cancel select a layout below.

□ <Creating Layout> ▾

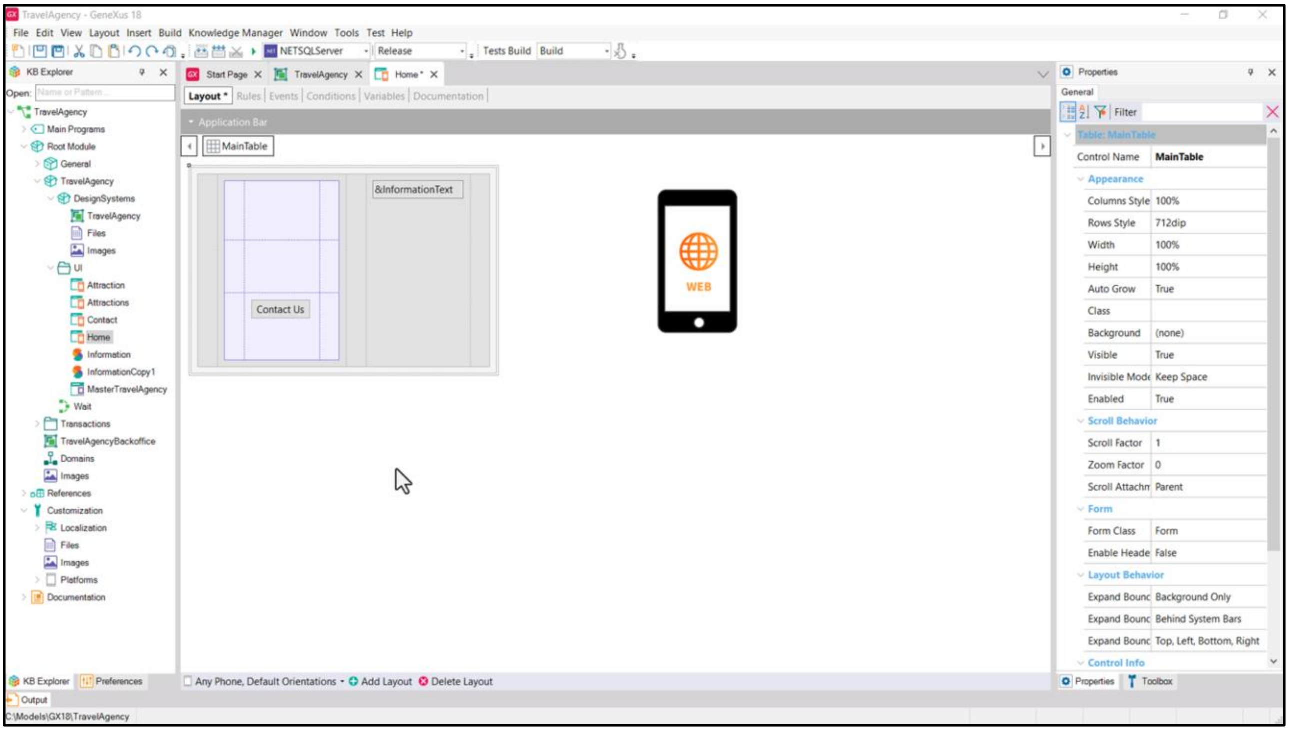
...I click here.



And there we see that now we have two layouts... this one is a specialization of this other one. And then I can handle this one separately from the other one.

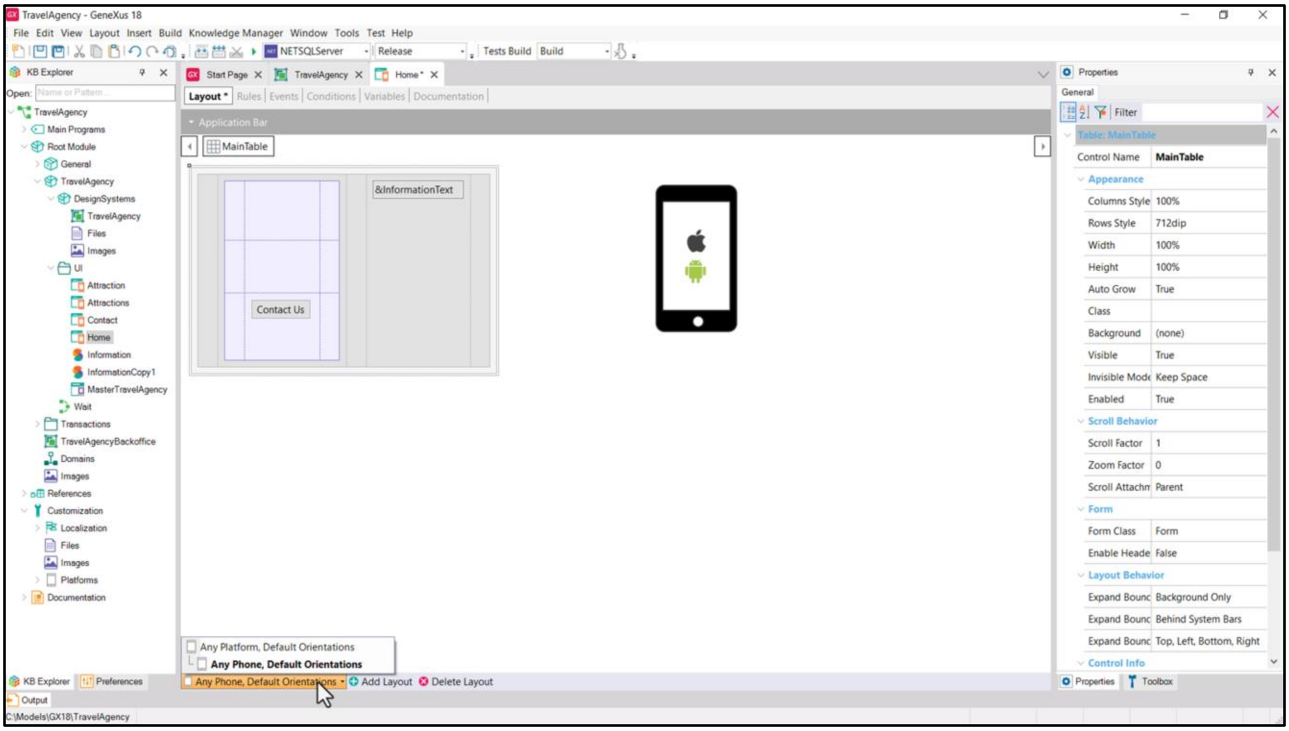

TravelAgency - GeneXus 18
File Edit View Layout Insert Build Knowledge Manager Window Tools Test Help
NETSQLServer
Release
Tests Build
Build
KB Explorer
Open:
TravelAgency
Main Programs
Root Module
General
TravelAgency
DesignSystems
TravelAgency
Files
Images
UI
Attraction
Attractions
Contact
Home
Information
InformationCopy1
MasterTravelAgency
Wait
Transactions
TravelAgencyBackoffice
Domains
Images
References
Customization
Localization
Files
Images
Platforms
Documentation
Start Page
TravelAgency
Home *
Layout *
Rules
Events
Conditions
Variables
Documentation
Application Bar
&InformationText
Contact Us
&InformationText
Any Phone, Default Orientations
Add Layout
Delete Layout
Properties
Filter
Toolbox
KB Explorer
Preferences
Output
C:\Models\GX18\TravelAgency

For example…



Control Name	MainTable
Appearance	
Columns Style	100%
Rows Style	712dip
Width	100%
Height	100%
Auto Grow	True
Class	
Background	(none)
Visible	True
Invisible Mode	Keep Space
Enabled	True
Scroll Behavior	
Scroll Factor	1
Zoom Factor	0
Scroll Attachm	Parent
Form	
Form Class	Form
Enable Heade	False
Layout Behavior	
Expand Bounc	Background Only
Expand Bounc	Behind System Bars
Expand Bounc	Top, Left, Bottom, Right
Control Info	

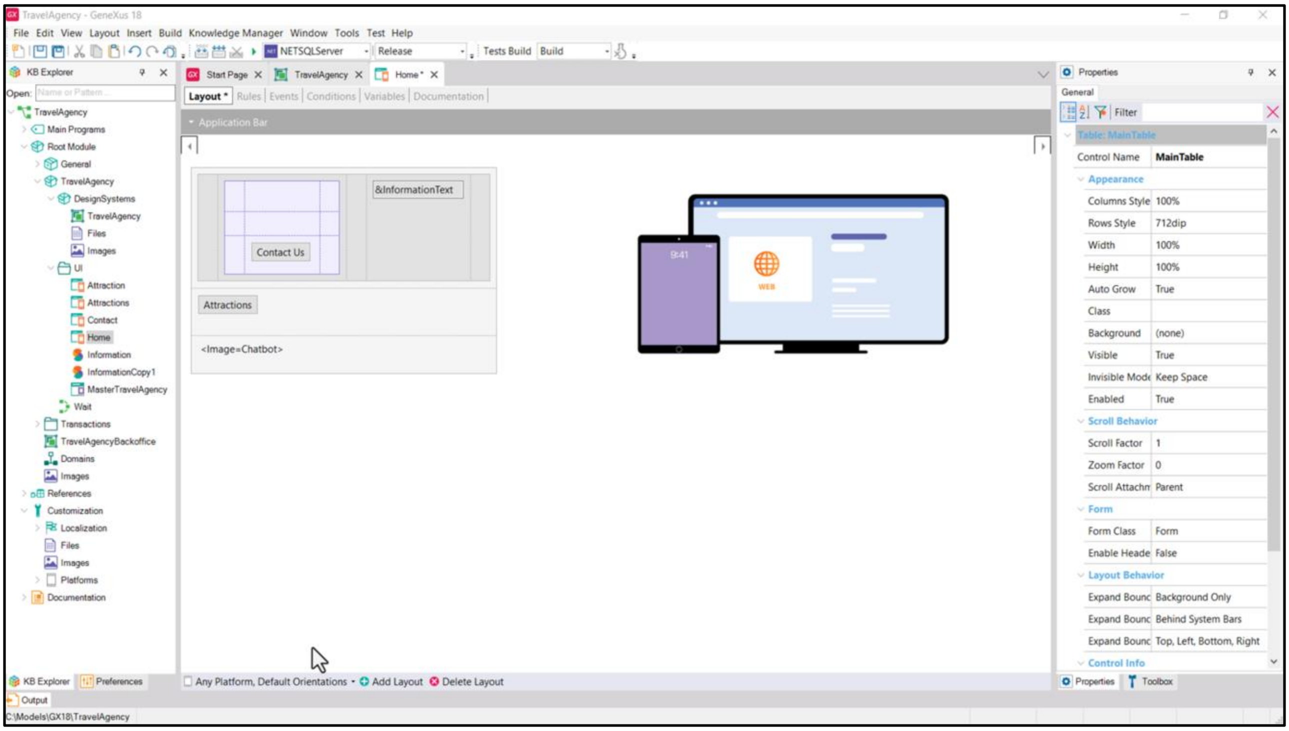
If I then run this panel in my Angular web application on a phone, it will use this layout because from the two that exist, it is the one that is closest to the device and execution platform.



Properties — Table: MainTable

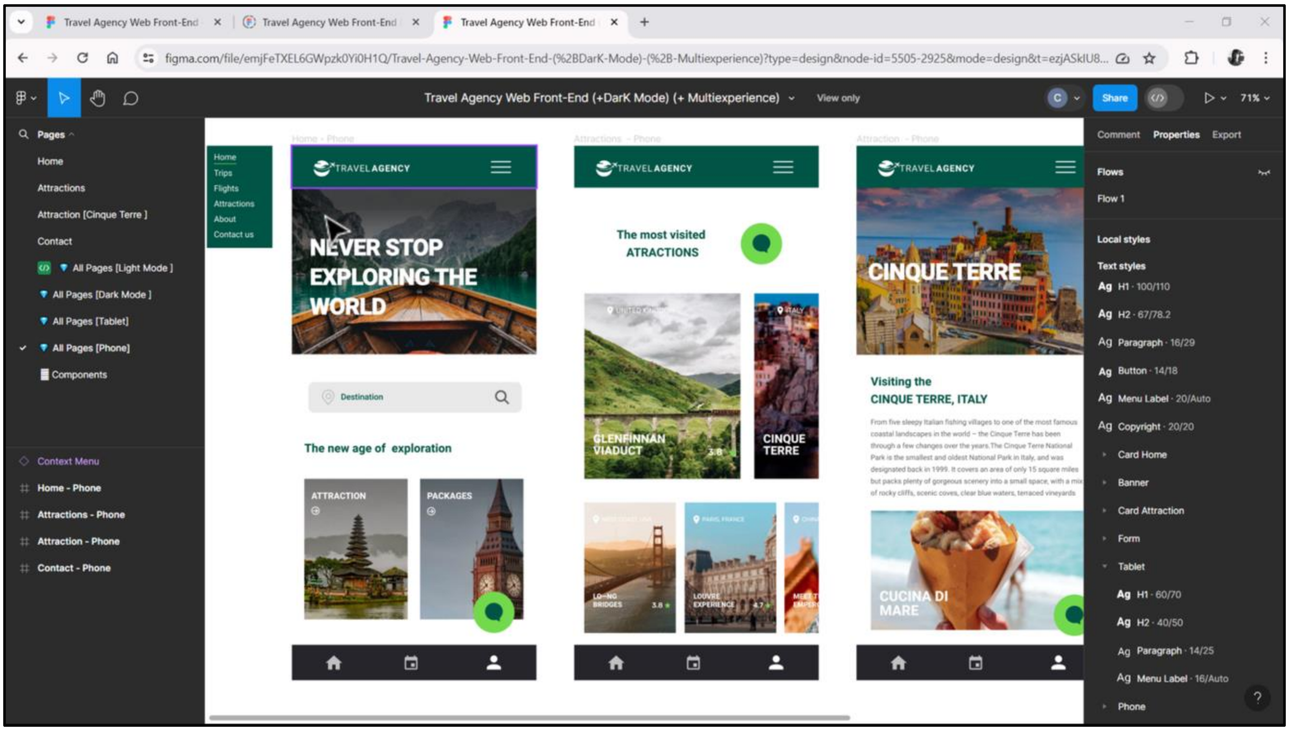
Control Name	MainTable
Columns Style	100%
Rows Style	712dip
Width	100%
Height	100%
Auto Grow	True
Class	
Background	(none)
Visible	True
Invisible Mode	Keep Space
Enabled	True
Scroll Factor	1
Zoom Factor	0
Scroll Attachm	Parent
Form Class	Form
Enable Heade	False
Expand Bounc	Background Only
Expand Bounc	Behind System Bars
Expand Bounc	Top, Left, Bottom, Right

When running the application on that same phone but this time the native application, Android or Apple, it will also use this layout.



Control Name	MainTable
Appearance	
Columns Style	100%
Rows Style	712dip
Width	100%
Height	100%
Auto Grow	True
Class	
Background	(none)
Visible	True
Invisible Mode	Keep Space
Enabled	True
Scroll Behavior	
Scroll Factor	1
Zoom Factor	0
Scroll Attachm	Parent
Form	
Form Class	Form
Enable Heade	False
Layout Behavior	
Expand Bounc	Background Only
Expand Bounc	Behind System Bars
Expand Bounc	Top, Left, Bottom, Right
Control Info	

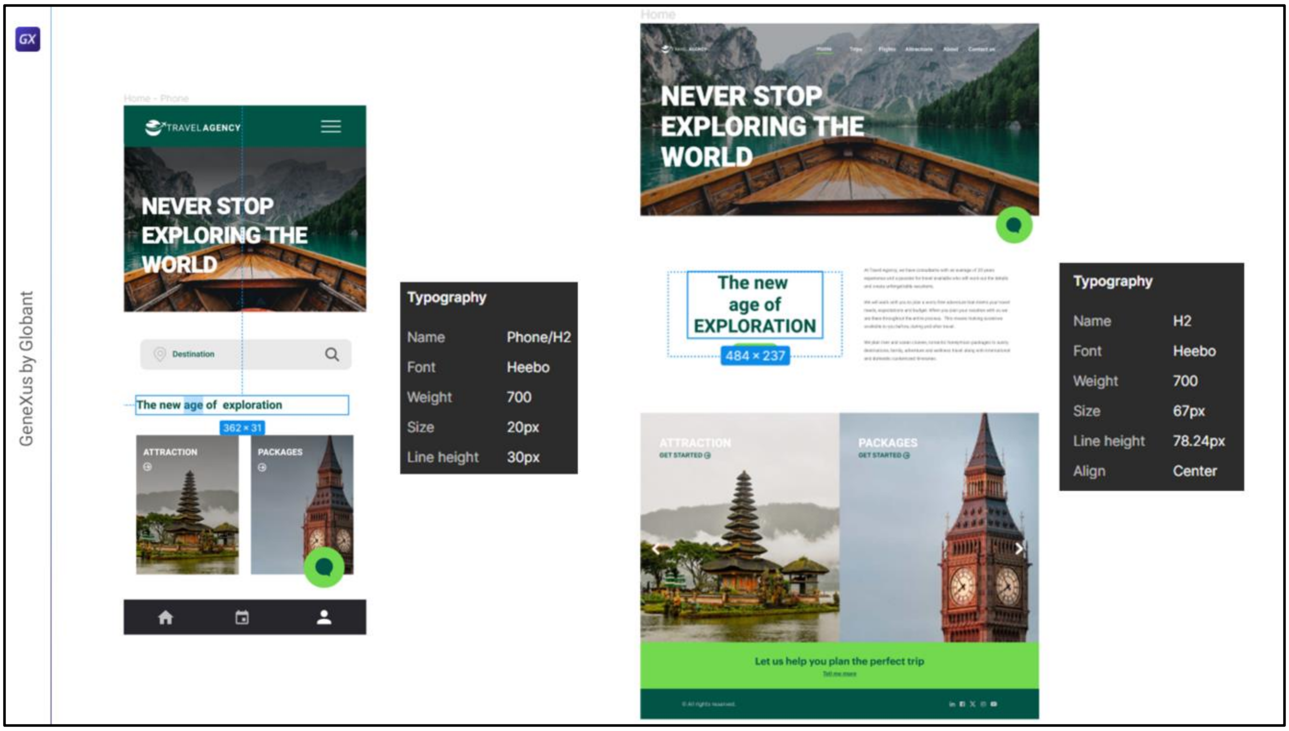
On the other hand, if I run the application on any other device and platform, it will use this other one, which is the most general. So, if I run the Angular web application for desktop size, this will be the layout.



From five sleepy Italian fishing villages to one of the most famous coastal landscapes in the world – the Cinque Terre has been through a few changes over the years. The Cinque Terre National Park is the smallest and oldest National Park in Italy, and was designated back in 1999. It covers an area of only 15 square miles but packs plenty of gorgeous scenery into a small space, with a mix of rocky cliffs, scenic coves, clear blue waters, terraced vineyards

In fact, for Phone size we will have to redesign almost the entire layout because its structure will be quite different.

We will come back to this topic of layouts at the end of the course. I don't want to focus on that now. But I do want to focus on the styles of the elements...



GeneXus by Globant
Home - Phone
TRAVEL AGENCY
NEVER STOP EXPLORING THE WORLD
Destination
The new age of exploration
362 × 31
ATTRACTION
PACKAGES
Home
NEVER STOP EXPLORING THE WORLD
The new age of EXPLORATION
484 × 237
ATTRACTION
GET STARTED
PACKAGES
GET STARTED
Let us help you plan the perfect trip

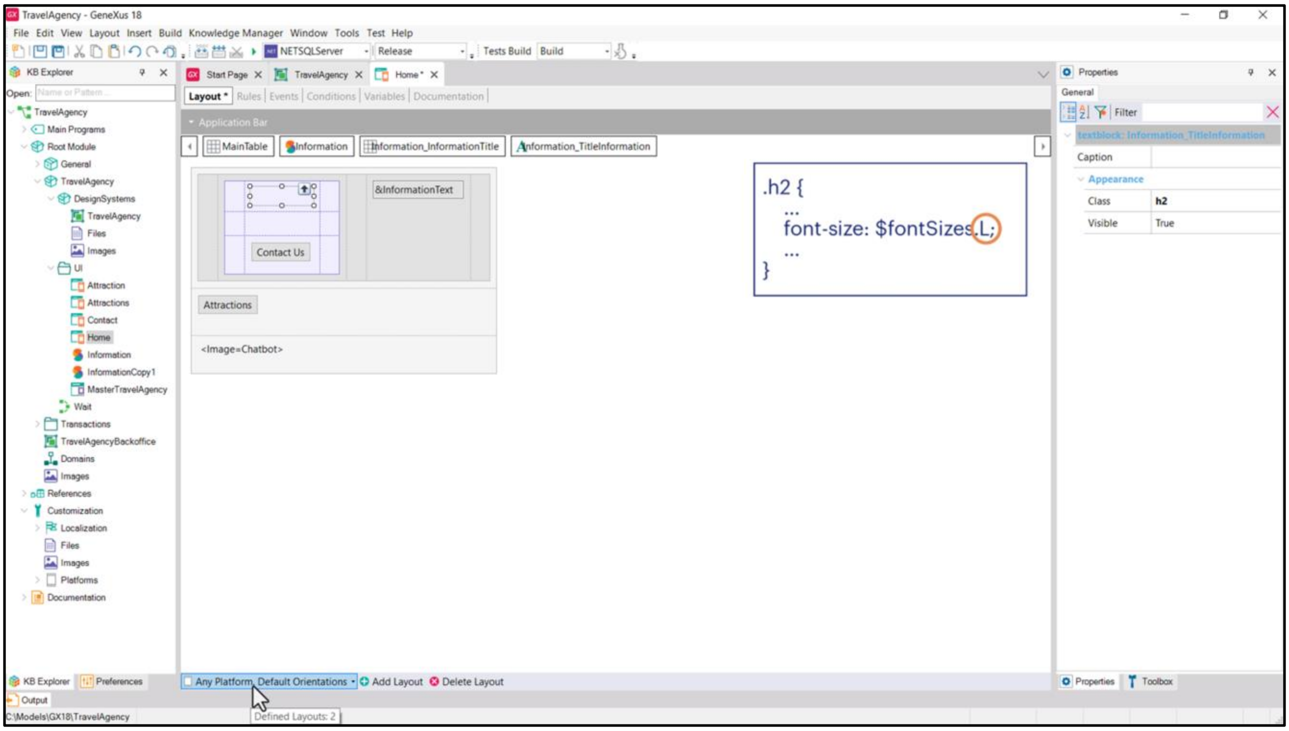
Typography

Name	Phone/H2
Font	Heebo
Weight	700
Size	20px
Line height	30px

Typography

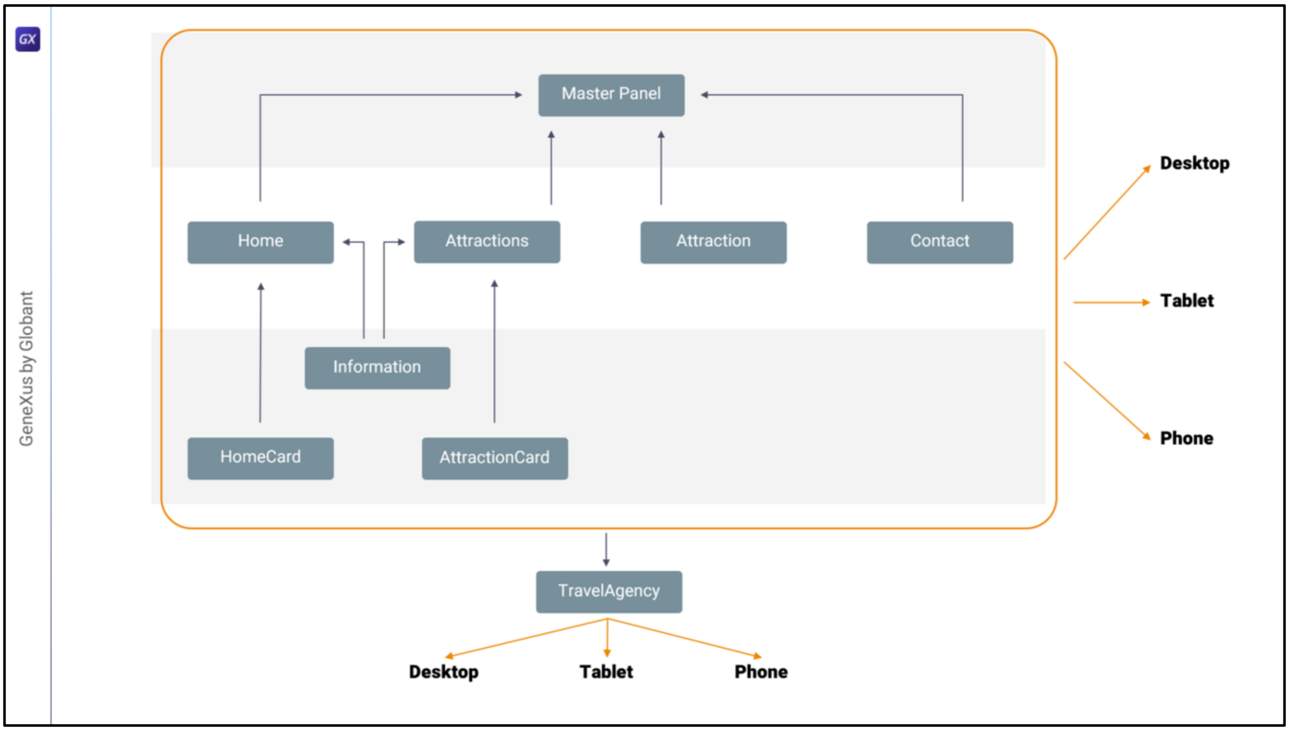
Name	H2
Font	Heebo
Weight	700
Size	67px
Line height	78.24px
Align	Center

For example, both layouts will share this text, which corresponds to the same typography style... h2.



```
.h2 {
  ...
  font-size: $fontSizes.L;
  ...
}
```

But what about the font-size property of that class? We can set it to correspond to the $fontSizes.L token; yes, perfect. But it shouldn't have the same size for the Desktop application as for the one running on the phone. In one case it should be 67 pixels and in the other it should be 20 pixels.



GeneXus by Globant

Master Panel

Home

Attractions

Attraction

Contact

Information

HomeCard

AttractionCard

Desktop

Tablet

Phone

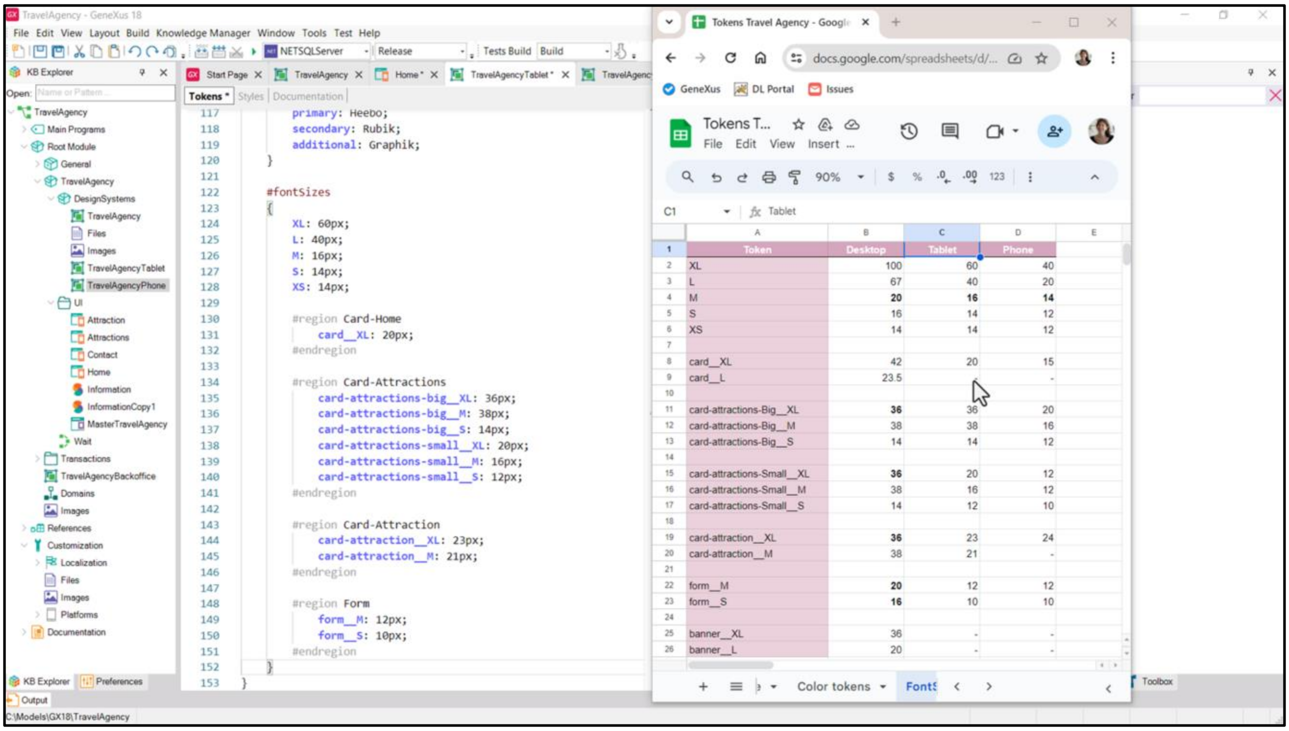
TravelAgency

Desktop

Tablet

Phone

One way to achieve this is to also think about DSO versions.



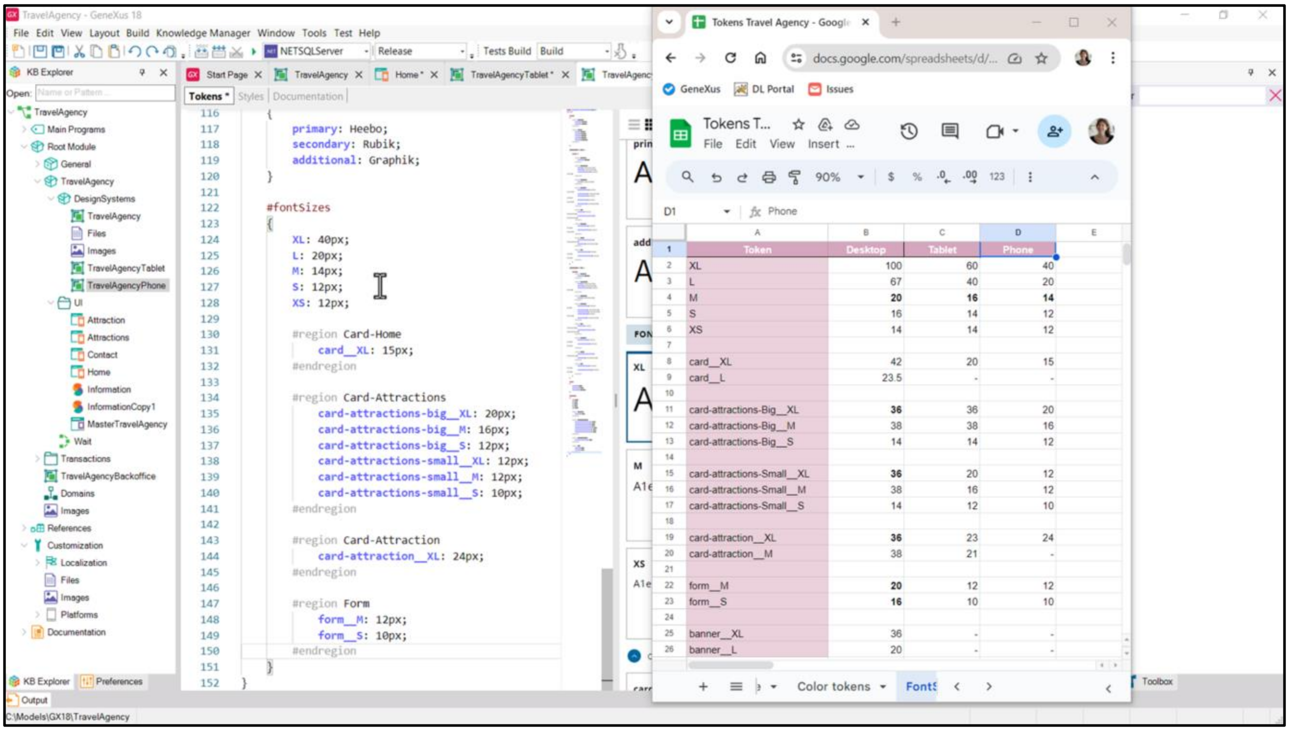
```
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 60px;
        L: 40px;
        M: 16px;
        S: 14px;
        XS: 14px;

        #region Card-Home
            card__XL: 20px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 36px;
            card-attractions-big__M: 38px;
            card-attractions-big__S: 14px;
            card-attractions-small__XL: 20px;
            card-attractions-small__M: 16px;
            card-attractions-small__S: 12px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 23px;
            card-attraction__M: 21px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

Token	Desktop	Tablet	Phone
XL	100	60	40
L	67	40	20
M	**20**	**16**	**14**
S	16	14	12
XS	14	14	12
card__XL	42	20	15
card__L	23.5	-	-
card-attractions-Big__XL	**36**	36	20
card-attractions-Big__M	38	38	16
card-attractions-Big__S	14	14	12
card-attractions-Small__XL	**36**	20	12
card-attractions-Small__M	38	16	12
card-attractions-Small__S	14	12	10
card-attraction__XL	**36**	23	24
card-attraction__M	38	21	-
form__M	**20**	12	12
form__S	**16**	10	10
banner__XL	36	-	-
banner__L	20	-	-

For example, leave the DSO for Desktop with the name TravelAgency, and save that one as TravelAgencyTablet.

And another one with the name TravelAgencyPhone.

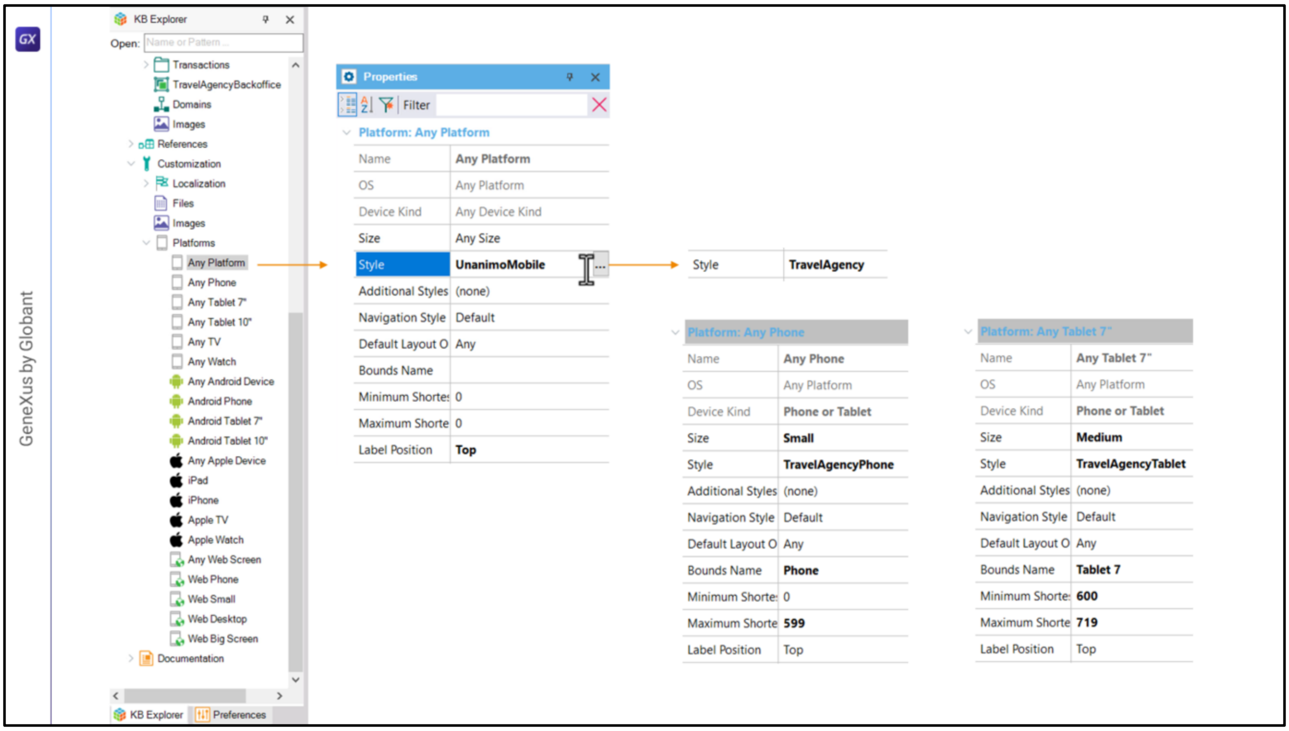
And to each one change the values of the tokens that vary by screen size. In this case, we would assign them the values of this column... note that I don't specify the ones that are not used for this size...



```
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 40px;
        L: 20px;
        M: 14px;
        S: 12px;
        XS: 12px;

        #region Card-Home
            card__XL: 15px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 20px;
            card-attractions-big__M: 16px;
            card-attractions-big__S: 12px;
            card-attractions-small__XL: 12px;
            card-attractions-small__M: 12px;
            card-attractions-small__S: 10px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 24px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

	Token	Desktop	Tablet	Phone
2	XL	100	60	40
3	L	67	40	20
4	M	**20**	**16**	**14**
5	S	16	14	12
6	XS	14	14	12
7				
8	card__XL	42	20	15
9	card__L	23.5	-	-
10				
11	card-attractions-Big__XL	**36**	36	20
12	card-attractions-Big__M	38	38	16
13	card-attractions-Big__S	14	14	12
14				
15	card-attractions-Small__XL	**36**	20	12
16	card-attractions-Small__M	38	16	12
17	card-attractions-Small__S	14	12	10
18				
19	card-attraction__XL	**36**	23	24
20	card-attraction__M	38	21	-
21				
22	form__M	**20**	12	12
23	form__S	**16**	10	10
24				
25	banner__XL	36	-	-
26	banner__L	20	-	-

And in this other case I place the values of the Phone column of the spreadsheet.



Platform: Any Platform

Name	Any Platform
OS	Any Platform
Device Kind	Any Device Kind
Size	Any Size
Style	UnanimoMobile
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	
Minimum Shortes	0
Maximum Shorte	0
Label Position	Top

Style	TravelAgency

Platform: Any Phone

Name	Any Phone
OS	Any Platform
Device Kind	Phone or Tablet
Size	Small
Style	TravelAgencyPhone
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	Phone
Minimum Shorte:	0
Maximum Shorte	599
Label Position	Top

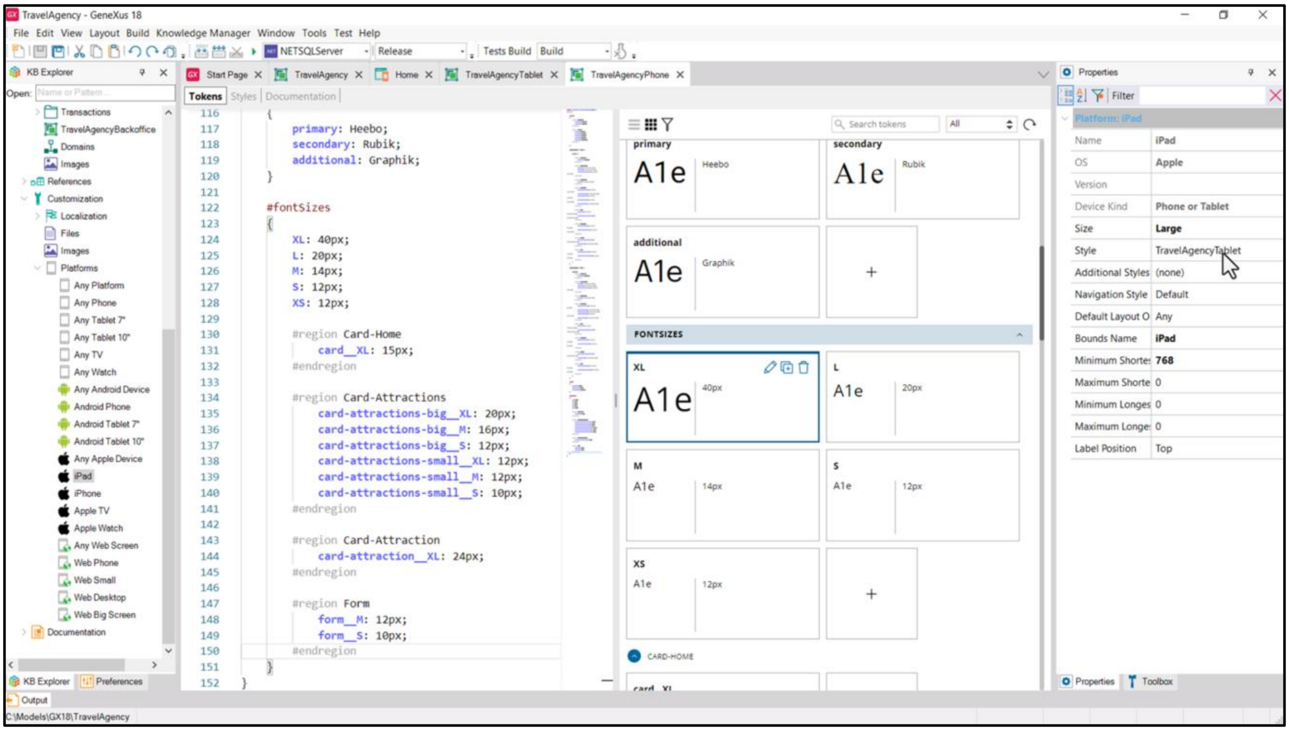
Platform: Any Tablet 7"

Name	Any Tablet 7"
OS	Any Platform
Device Kind	Phone or Tablet
Size	Medium
Style	TravelAgencyTablet
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	Tablet 7
Minimum Shorte:	600
Maximum Shorte	719
Label Position	Top

Where do I indicate which DSO to use in each case?

In the platforms...

If for Phone and Tablet sizes I will not distinguish between web and native applications, then I can specify it at the Any level... For Any Platform I specify as Style that of the TravelAgency DSO, while for Any Phone I set TravelAgencyPhone and for Any Tablet of 7 the TravelAgencyTablet, and the same for the one of 10.



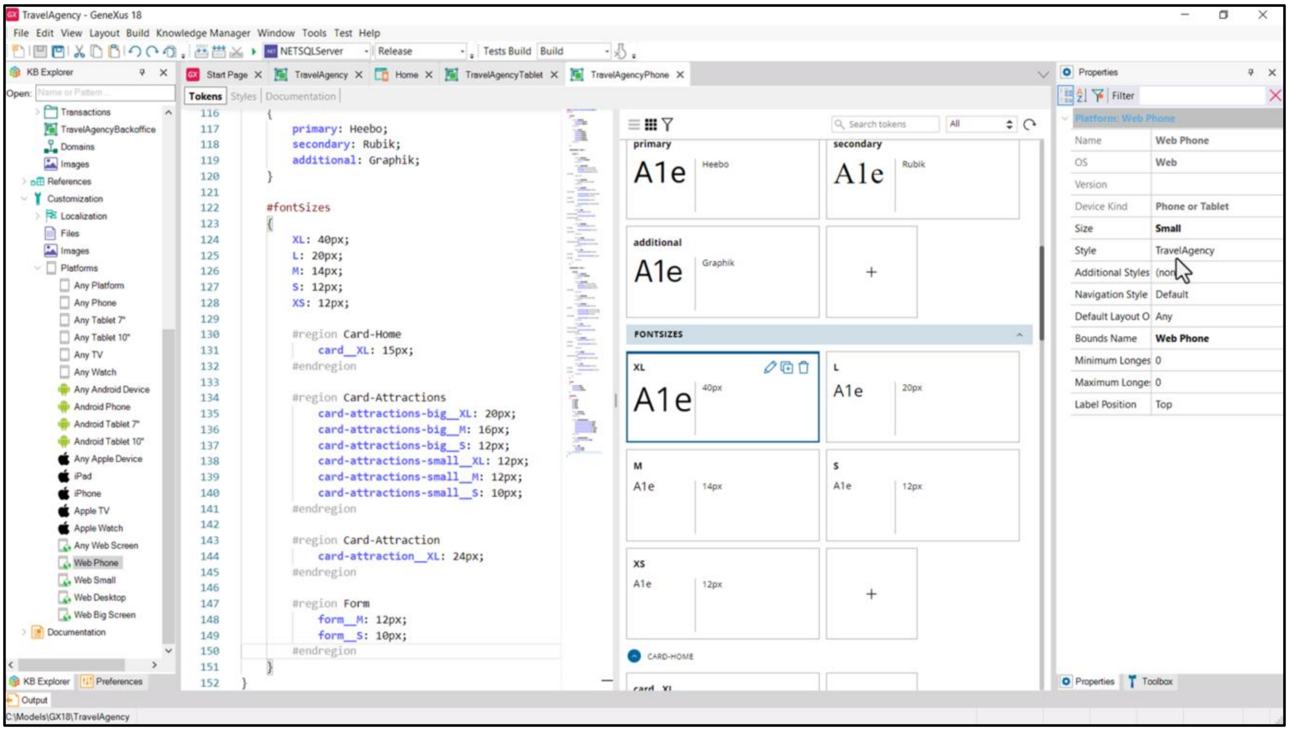
```
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 40px;
        L: 20px;
        M: 14px;
        S: 12px;
        XS: 12px;

        #region Card-Home
            card__XL: 15px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 20px;
            card-attractions-big__M: 16px;
            card-attractions-big__S: 12px;
            card-attractions-small__XL: 12px;
            card-attractions-small__M: 12px;
            card-attractions-small__S: 10px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 24px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

Platform: iPad

Name	iPad
OS	Apple
Version	
Device Kind	Phone or Tablet
Size	Large
Style	TravelAgencyTablet
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	iPad
Minimum Shortes	768
Maximum Shorte	0
Minimum Longes	0
Maximum Longe:	0
Label Position	Top

Having done this at the Any level then impacts the specific platforms. Note that now the value for Any Android will be the same as that of Any Platform... and for Android Phone? That of Any Phone. We will not be surprised to see for Android Tablet 7 and Android Tablet 10 the DSO that we specified for Any Tablet 7 and 10.

Let's see Any Apple...
iPad…

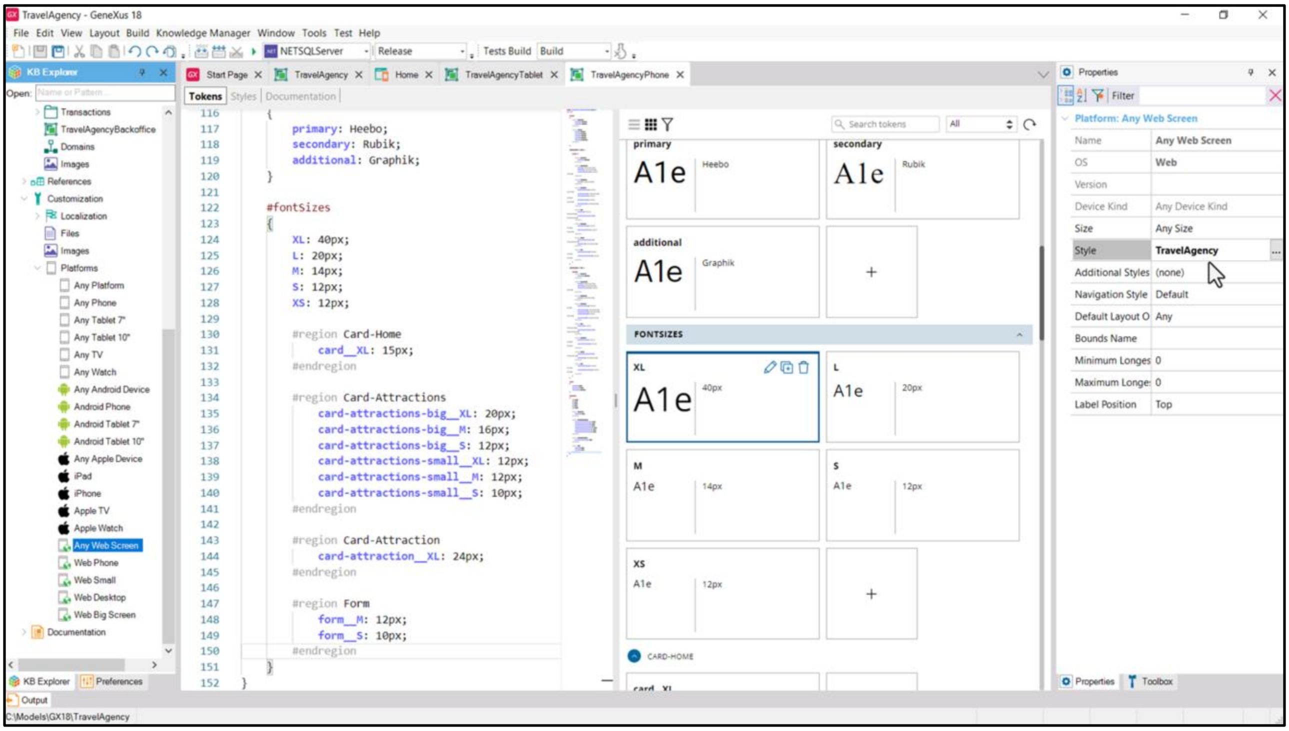


```
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 40px;
        L: 20px;
        M: 14px;
        S: 12px;
        XS: 12px;

        #region Card-Home
            card__XL: 15px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 20px;
            card-attractions-big__M: 16px;
            card-attractions-big__S: 12px;
            card-attractions-small__XL: 12px;
            card-attractions-small__M: 12px;
            card-attractions-small__S: 10px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 24px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

Platform: Web Phone

Name	Web Phone
OS	Web
Version	
Device Kind	Phone or Tablet
Size	Small
Style	TravelAgency
Additional Styles	(non
Navigation Style	Default
Default Layout O	Any
Bounds Name	Web Phone
Minimum Longes	0
Maximum Longe:	0
Label Position	Top

Well, let's move on to the web... why isn't it being applied here? Why is TravelAgency always there? I don't know if you remember, we had changed the default value, the one inherited from Any Platform, at the beginning of the course. That default value, the one inherited from Any Platform, corresponded to Unanimo.

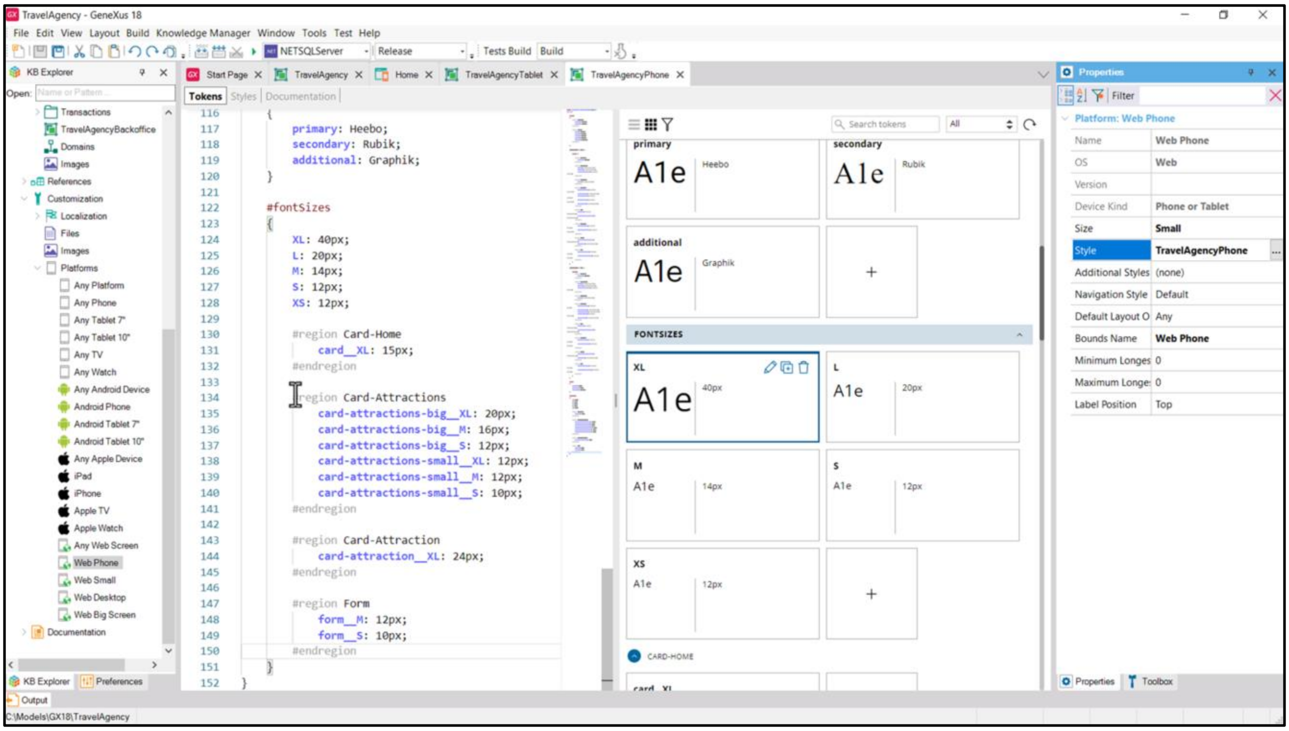


```
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 40px;
        L: 20px;
        M: 14px;
        S: 12px;
        XS: 12px;

        #region Card-Home
            card__XL: 15px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 20px;
            card-attractions-big__M: 16px;
            card-attractions-big__S: 12px;
            card-attractions-small__XL: 12px;
            card-attractions-small__M: 12px;
            card-attractions-small__S: 10px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 24px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

Platform: Any Web Screen

Name	Any Web Screen
OS	Web
Version	
Device Kind	Any Device Kind
Size	Any Size
Style	**TravelAgency**
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	
Minimum Longes	0
Maximum Longe:	0
Label Position	Top

And we changed here (we had changed) to our TravelAgency, that's why it's in bold! And what happens from there is that all these other ones inherit the value of that one.

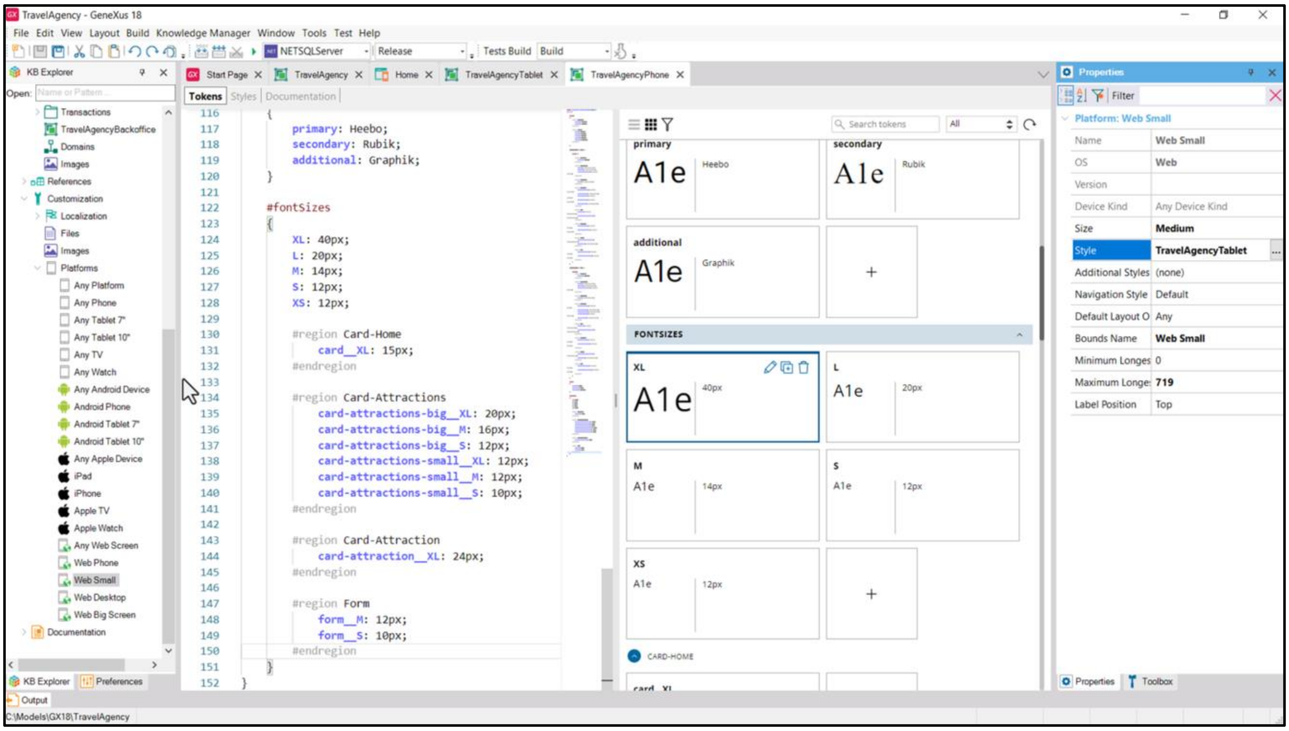


```
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 40px;
        L: 20px;
        M: 14px;
        S: 12px;
        XS: 12px;

        #region Card-Home
            card__XL: 15px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 20px;
            card-attractions-big__M: 16px;
            card-attractions-big__S: 12px;
            card-attractions-small__XL: 12px;
            card-attractions-small__M: 12px;
            card-attractions-small__S: 10px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 24px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

Platform: Web Phone

Name	Web Phone
OS	Web
Version	
Device Kind	Phone or Tablet
Size	Small
Style	TravelAgencyPhone
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	Web Phone
Minimum Longes	0
Maximum Longe:	0
Label Position	Top

So here we would have to change for this one....

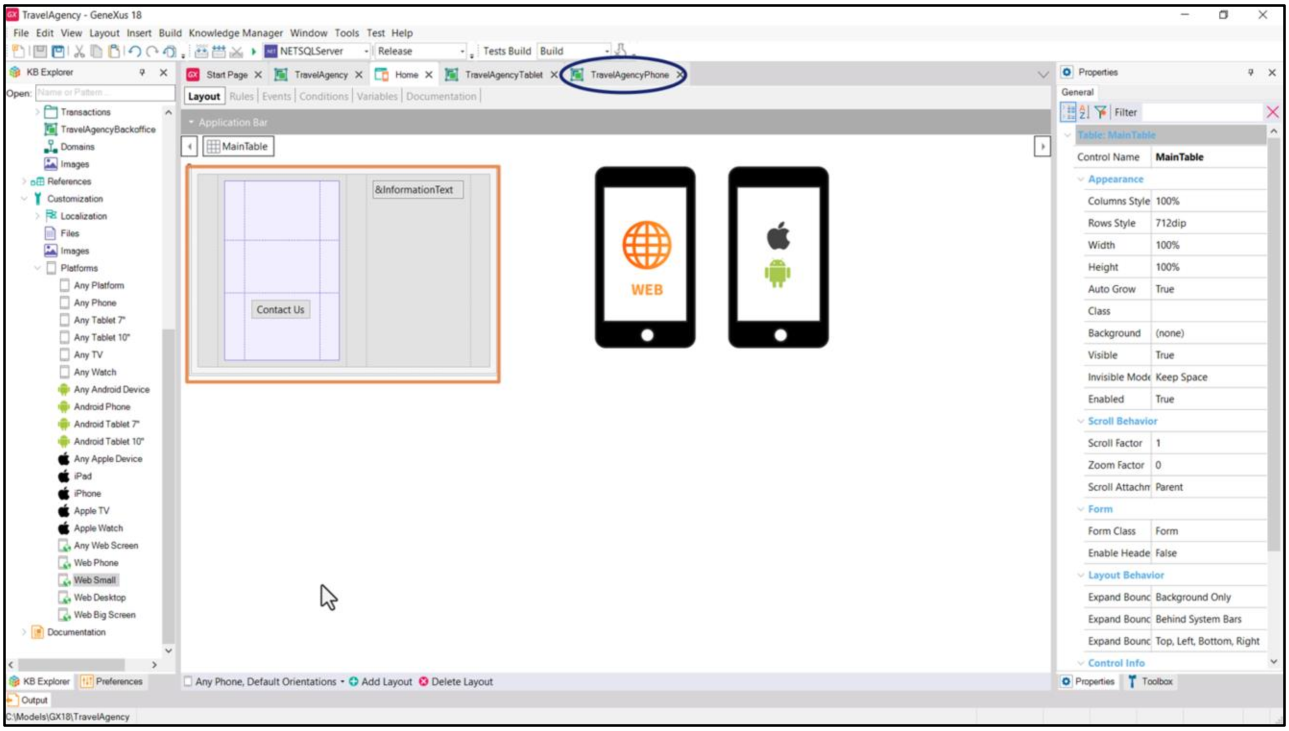


```
    {
        primary: Heebo;
        secondary: Rubik;
        additional: Graphik;
    }

    #fontSizes
    {
        XL: 40px;
        L: 20px;
        M: 14px;
        S: 12px;
        XS: 12px;

        #region Card-Home
            card__XL: 15px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 20px;
            card-attractions-big__M: 16px;
            card-attractions-big__S: 12px;
            card-attractions-small__XL: 12px;
            card-attractions-small__M: 12px;
            card-attractions-small__S: 10px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 24px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

Platform: Web Small

Name	Web Small
OS	Web
Version	
Device Kind	Any Device Kind
Size	Medium
Style	TravelAgencyTablet
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	Web Small
Minimum Longes	0
Maximum Longe:	719
Label Position	Top

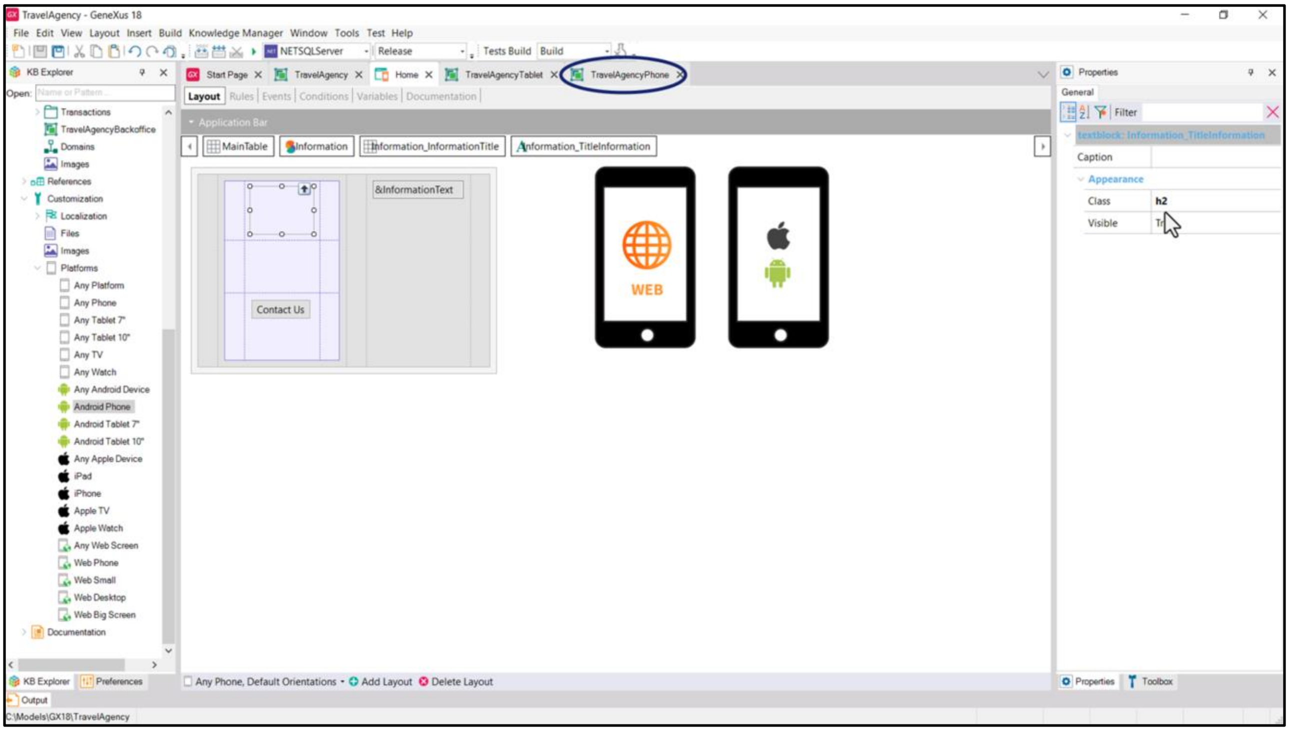
...and here for this other one.



Property	Value
Control Name	MainTable
Columns Style	100%
Rows Style	712dip
Width	100%
Height	100%
Auto Grow	True
Class	
Background	(none)
Visible	True
Invisible Mode	Keep Space
Enabled	True
Scroll Factor	1
Zoom Factor	0
Scroll Attachm	Parent
Form Class	Form
Enable Heade	False
Expand Bounc	Background Only
Expand Bounc	Behind System Bars
Expand Bounc	Top, Left, Bottom, Right

With this configuration, if we think about what will happen when we run our Home panel on a phone... the layout that will be chosen, of the two that exist, will be this one. It doesn't matter if the application is the native one or the web one; in either case, as there are no more specific options, this will be the layout...

And the DSO that it will use? If the application is a web application, it will be this one...
If the application is for Android... this, that is to say, the same one...



textblock: Information_TitleInformation

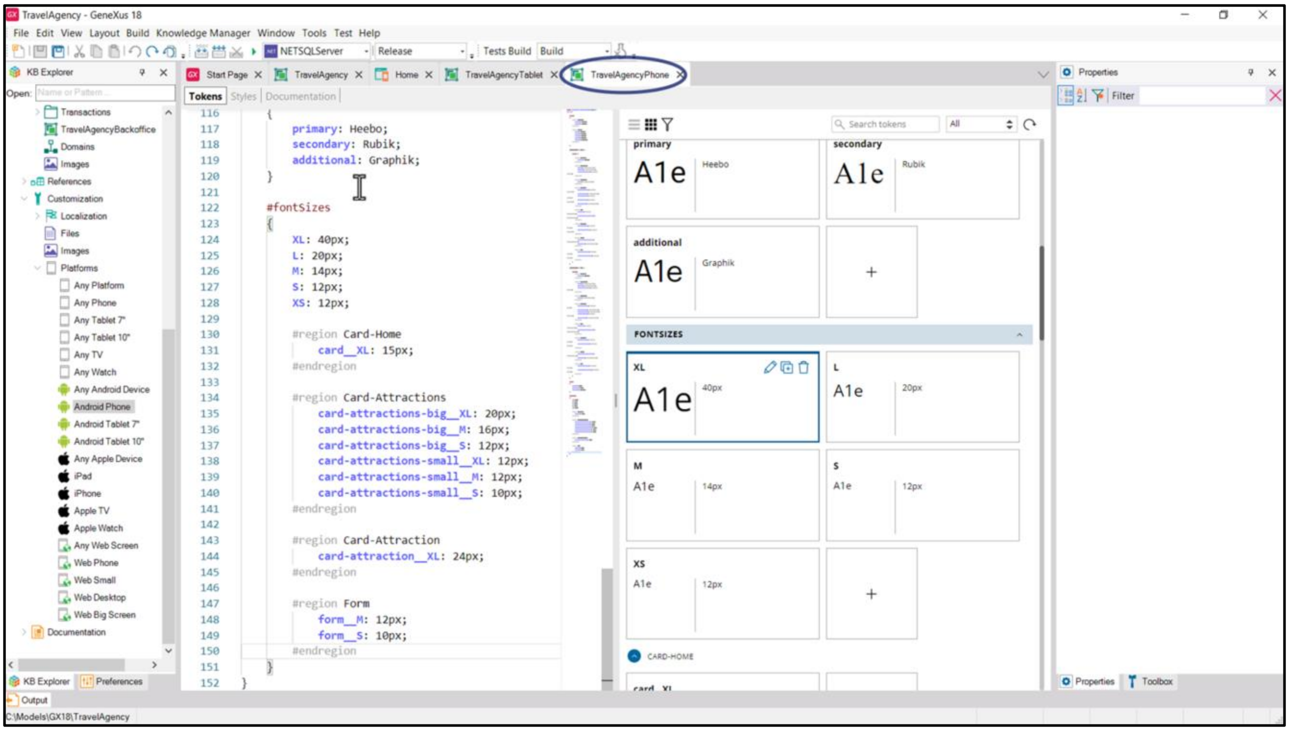
Caption

Appearance

Class: h2

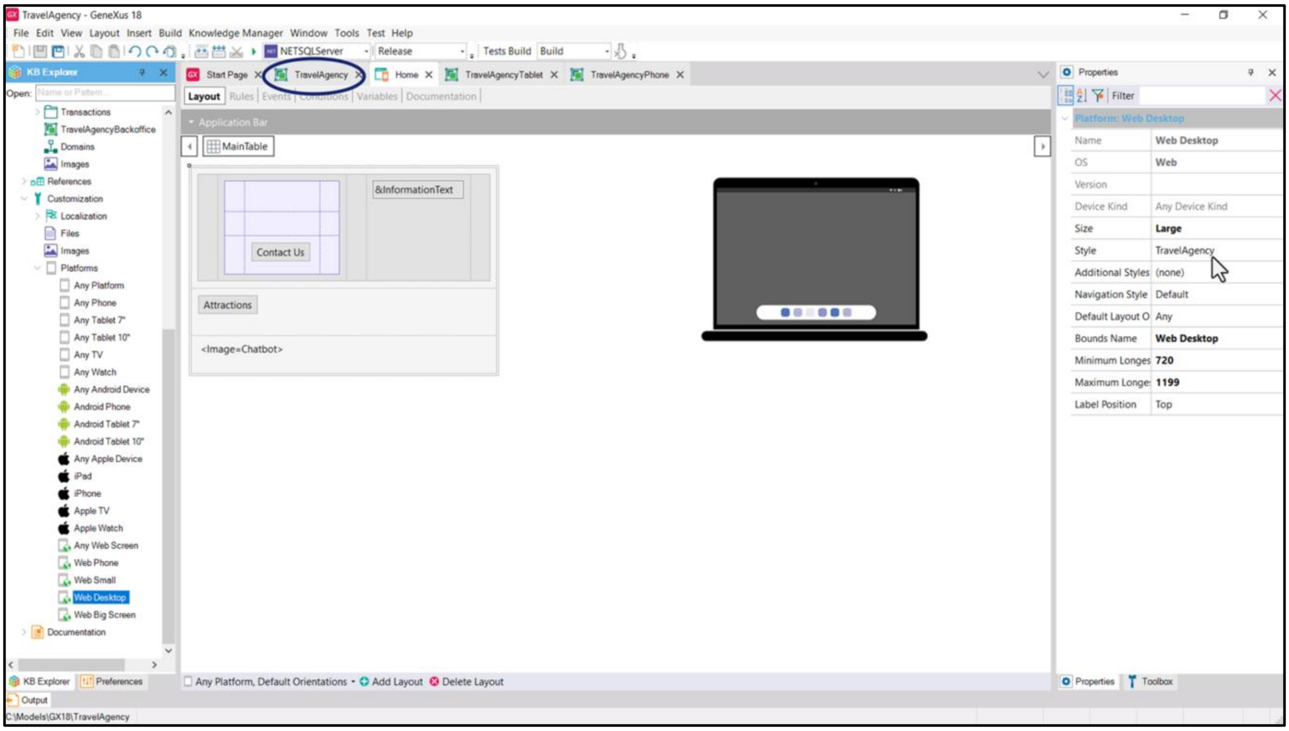
Visible: Tr

So, what style will this text have? The one specified by the h2 class... of the corresponding DSO, this one...



```
        {
            primary: Heebo;
            secondary: Rubik;
            additional: Graphik;
        }

        #fontSizes
        {
            XL: 40px;
            L: 20px;
            M: 14px;
            S: 12px;
            XS: 12px;

            #region Card-Home
                card__XL: 15px;
            #endregion

            #region Card-Attractions
                card-attractions-big__XL: 20px;
                card-attractions-big__M: 16px;
                card-attractions-big__S: 12px;
                card-attractions-small__XL: 12px;
                card-attractions-small__M: 12px;
                card-attractions-small__S: 10px;
            #endregion

            #region Card-Attraction
                card-attraction__XL: 24px;
            #endregion

            #region Form
                form__M: 12px;
                form__S: 10px;
            #endregion
        }
    }
```

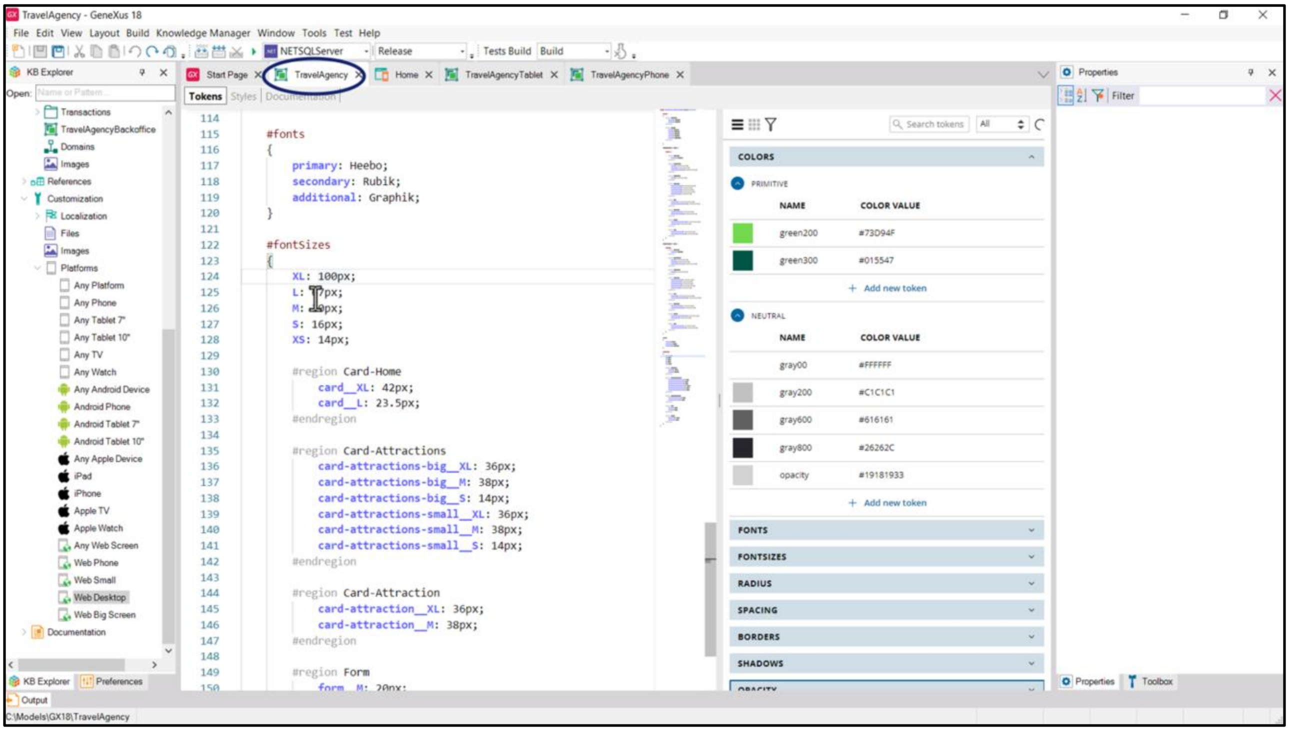
Then the font size of that text will be the one indicated by this token... which in this DSO is worth... 20 pixels.



Platform: Web Desktop

Name	Web Desktop
OS	Web
Version	
Device Kind	Any Device Kind
Size	Large
Style	TravelAgency
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	Web Desktop
Minimum Longes	720
Maximum Longe:	1199
Label Position	Top

On the other hand, if we were running the web application in the browser of a laptop, this will be the selected layout, whose style will correspond to the one of this DSO...



```
#fonts
{
    primary: Heebo;
    secondary: Rubik;
    additional: Graphik;
}

#fontSizes
{
    XL: 100px;
    L: [illegible]7px;
    M: [illegible]0px;
    S: 16px;
    XS: 14px;

    #region Card-Home
        card__XL: 42px;
        card__L: 23.5px;
    #endregion

    #region Card-Attractions
        card-attractions-big__XL: 36px;
        card-attractions-big__M: 38px;
        card-attractions-big__S: 14px;
        card-attractions-small__XL: 36px;
        card-attractions-small__M: 38px;
        card-attractions-small__S: 14px;
    #endregion

    #region Card-Attraction
        card-attraction__XL: 36px;
        card-attraction__M: 38px;
    #endregion

    #region Form
        form__M: 20px;
```

COLORS

PRIMITIVE

	NAME	COLOR VALUE
🟩	green200	#73D94F
🟩	green300	#015547

+ Add new token

NEUTRAL

	NAME	COLOR VALUE
	gray00	#FFFFFF
■	gray200	#C1C1C1
■	gray600	#616161
■	gray800	#26262C
■	opacity	#19181933

+ Add new token

FONTS

FONTSIZES

RADIUS

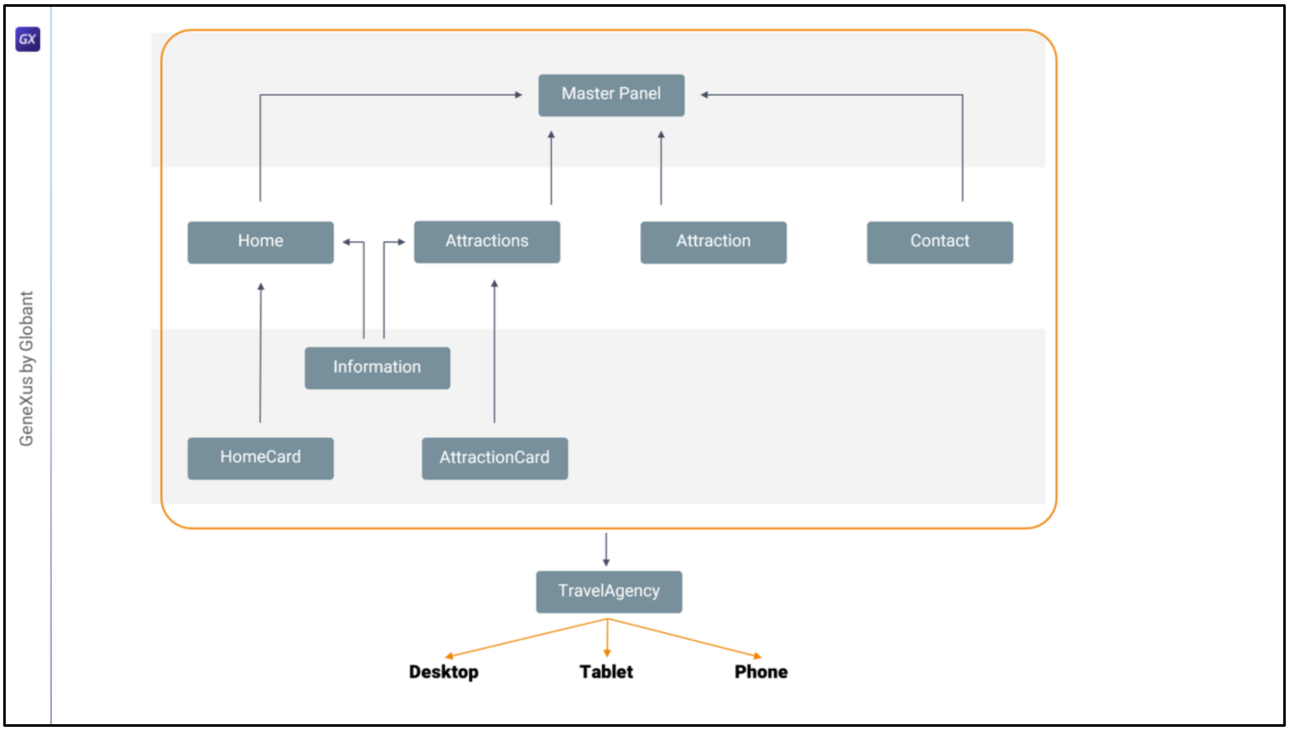
SPACING

BORDERS

SHADOWS

OPACITY

This text will then be styled according to this class, which in this DSO has this definition, identical for the moment to the other one. The only thing that varies is the value of this token, which here will be 67 pixels.



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Master Panel

Home

Attractions

Attraction

Contact

Information

HomeCard

AttractionCard

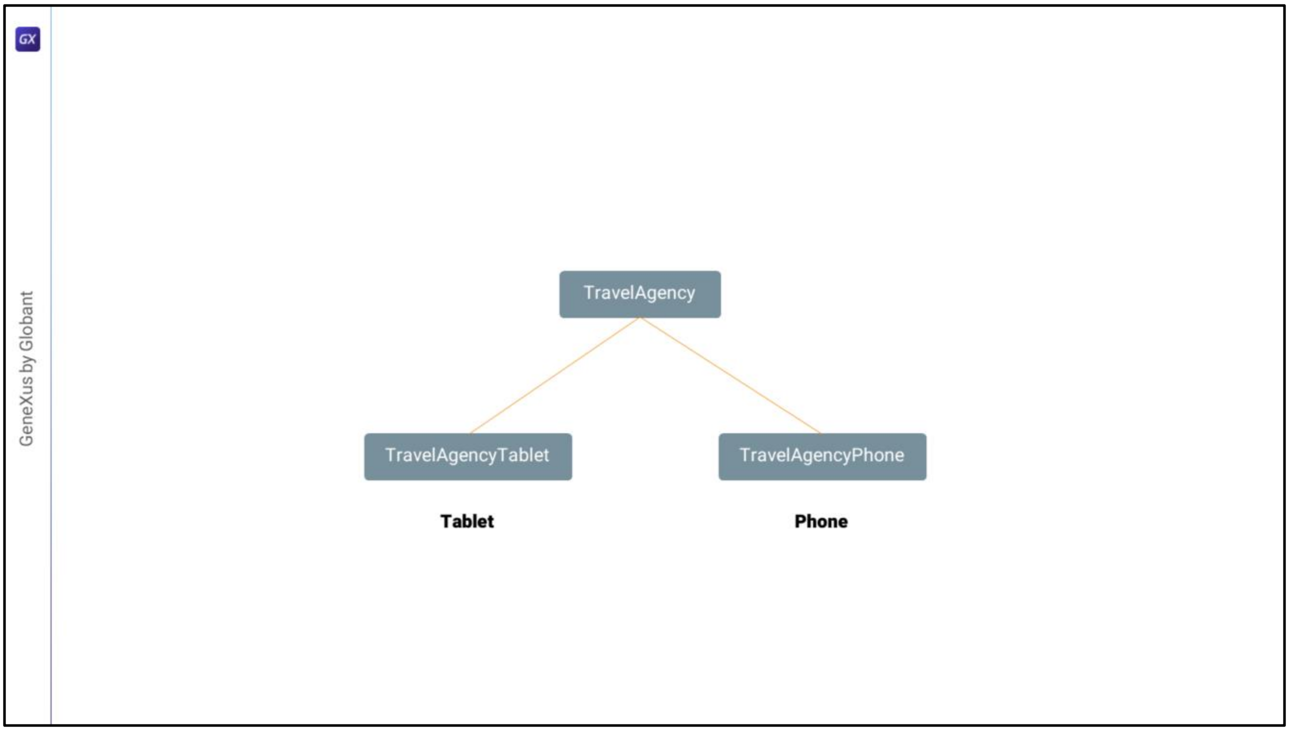
TravelAgency

Desktop

Tablet

Phone

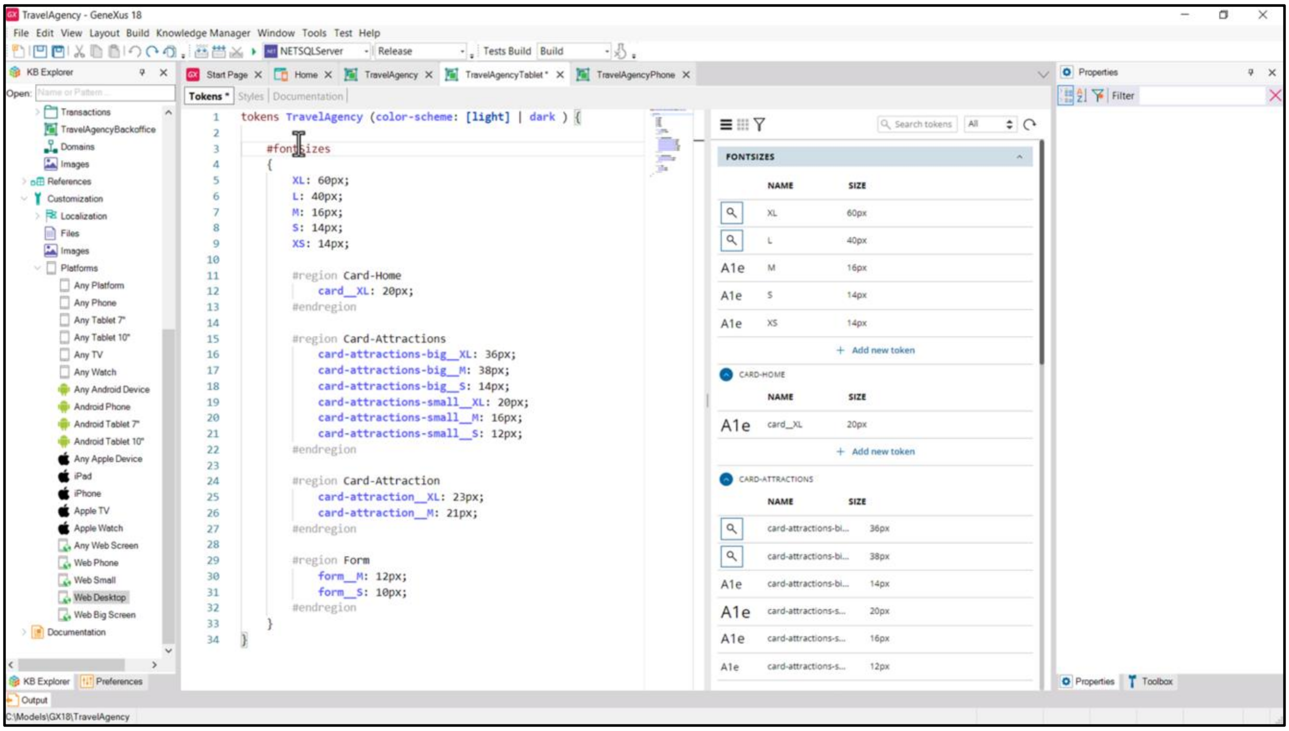
You may be thinking that if so many things are identical between the 3 DSOs and only a few vary....



... wouldn't it be better to reuse what is identical and specialize only in what is different? The answer to that is always YES.

Since thinking about all the variations at the same time is a bit overwhelming, in general we work on one of the versions, which in this case is the Desktop, and only after we finish we work with the others.

With the current state of things, I would think that the default will be our TravelAgency DSO, which is the one we have been working on and which contains all the definitions, and then in the Tablet and Phone DSO I would import everything from the default DSO and then specialize what is different.



```
tokens TravelAgency (color-scheme: [light] | dark ) {

    #fontsizes
    {
        XL: 60px;
        L: 40px;
        M: 16px;
        S: 14px;
        XS: 14px;

        #region Card-Home
            card__XL: 20px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 36px;
            card-attractions-big__M: 38px;
            card-attractions-big__S: 14px;
            card-attractions-small__XL: 20px;
            card-attractions-small__M: 16px;
            card-attractions-small__S: 12px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 23px;
            card-attraction__M: 21px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

FONTSIZES

NAME	SIZE
XL	60px
L	40px
M	16px
S	14px
XS	14px

CARD-HOME

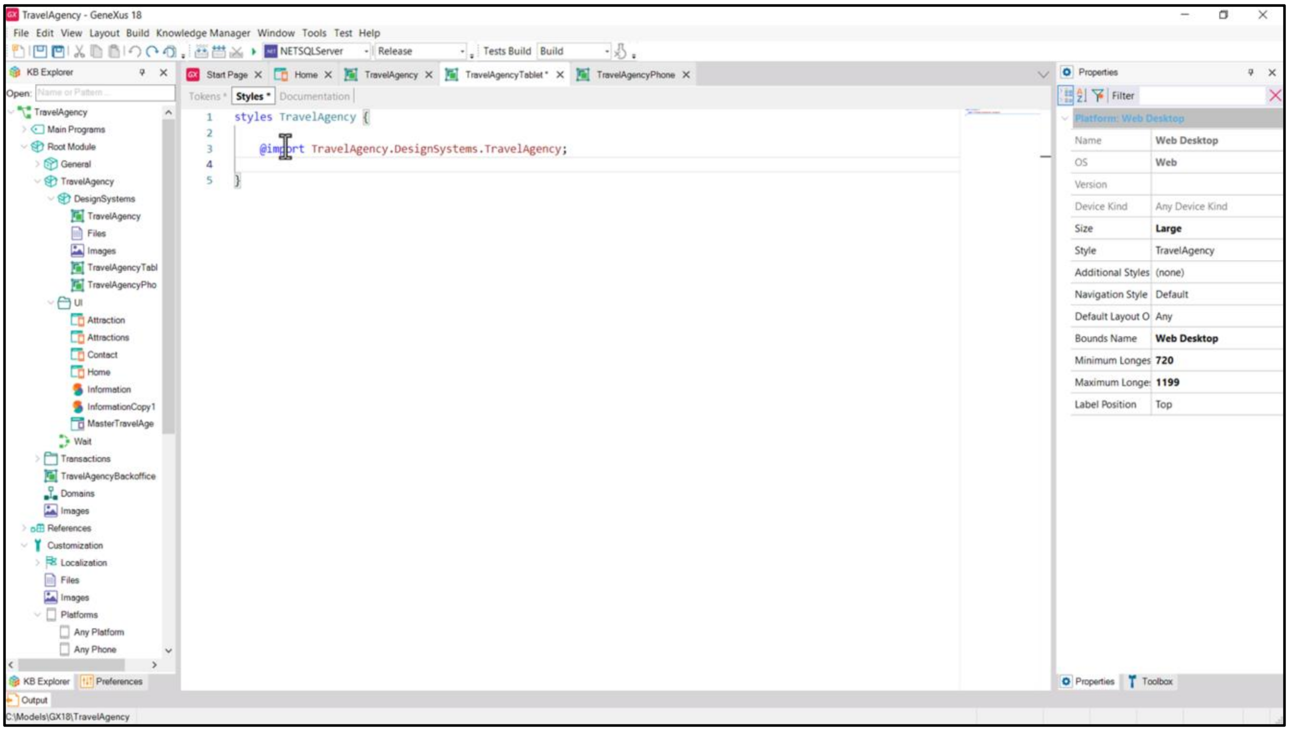
NAME	SIZE
card__XL	20px

CARD-ATTRACTIONS

NAME	SIZE
card-attractions-bi...	36px
card-attractions-bi...	38px
card-attractions-bi...	14px
card-attractions-s...	20px
card-attractions-s...	16px
card-attractions-s...	12px

That is, I would do this...

Remove from here all the tokens that are already identical in TravelAgency...



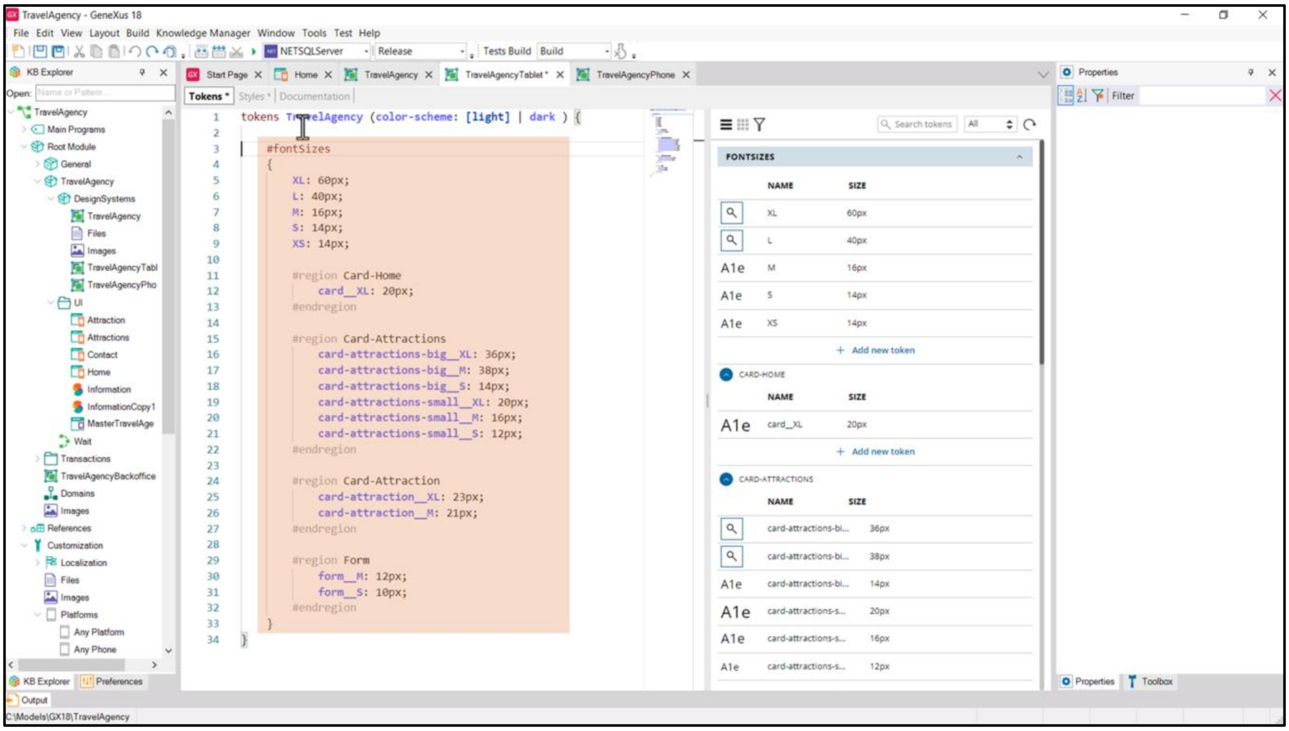
```
styles TravelAgency {

    @import TravelAgency.DesignSystems.TravelAgency;

}
```

Name	Web Desktop
OS	Web
Version	
Device Kind	Any Device Kind
Size	Large
Style	TravelAgency
Additional Styles	(none)
Navigation Style	Default
Default Layout O	Any
Bounds Name	Web Desktop
Minimum Longes	720
Maximum Longe:	1199
Label Position	Top

Delete all the identical definitions in the Styles tab, but import everything from the DSO that is in the TravelAgency module, DesignSystems submodule, and is called TravelAgency (both the Tokens and Styles tabs: I'm importing all this from TravelAgency).



```
tokens TravelAgency (color-scheme: [light] | dark ) {

    #fontSizes
    {
        XL: 60px;
        L: 40px;
        M: 16px;
        S: 14px;
        XS: 14px;

        #region Card-Home
            card__XL: 20px;
        #endregion

        #region Card-Attractions
            card-attractions-big__XL: 36px;
            card-attractions-big__M: 38px;
            card-attractions-big__S: 14px;
            card-attractions-small__XL: 20px;
            card-attractions-small__M: 16px;
            card-attractions-small__S: 12px;
        #endregion

        #region Card-Attraction
            card-attraction__XL: 23px;
            card-attraction__M: 21px;
        #endregion

        #region Form
            form__M: 12px;
            form__S: 10px;
        #endregion
    }
}
```

FONTSIZES

	NAME	SIZE
🔍	XL	60px
🔍	L	40px
A1e	M	16px
A1e	S	14px
A1e	XS	14px

+ Add new token

CARD-HOME

	NAME	SIZE
A1e	card__XL	20px

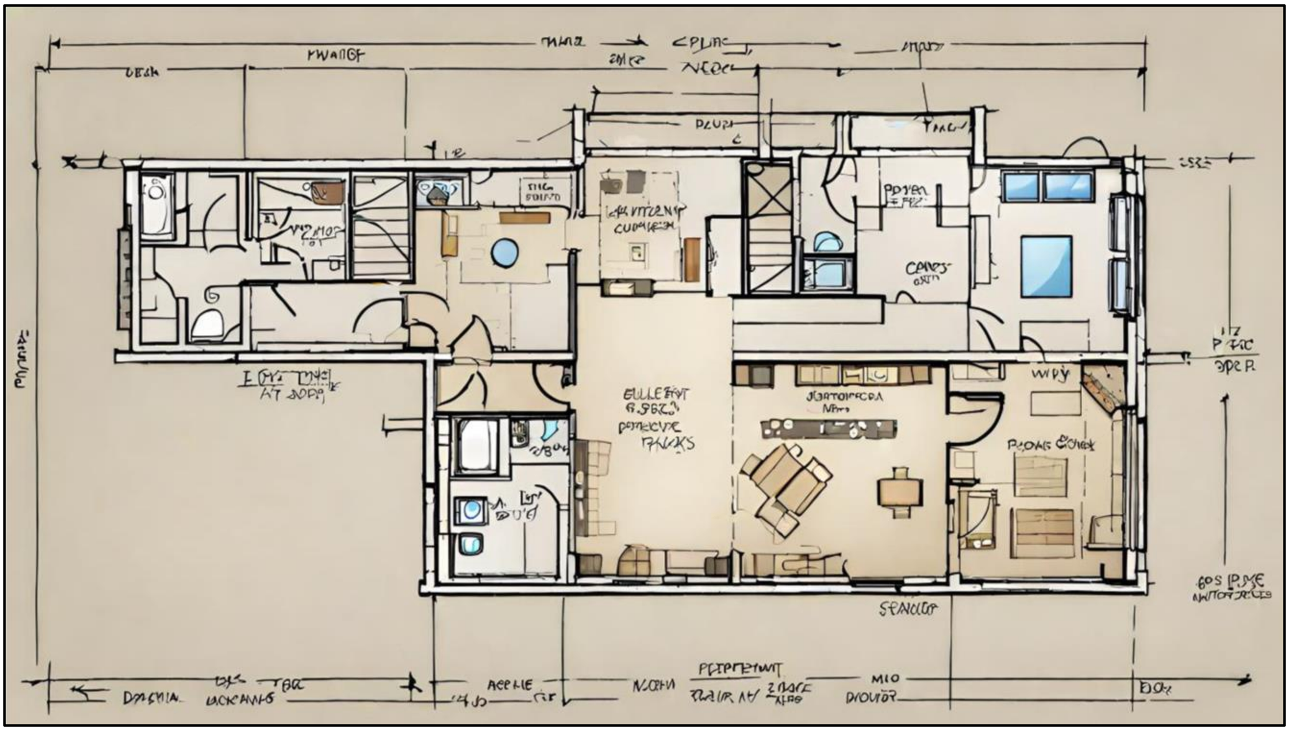
+ Add new token

CARD-ATTRACTIONS

	NAME	SIZE
🔍	card-attractions-bi...	36px
🔍	card-attractions-bi...	38px
A1e	card-attractions-bi...	14px
A1e	card-attractions-s...	20px
A1e	card-attractions-s...	16px
A1e	card-attractions-s...	12px

Everything is imported, and these tokens are overwritten.

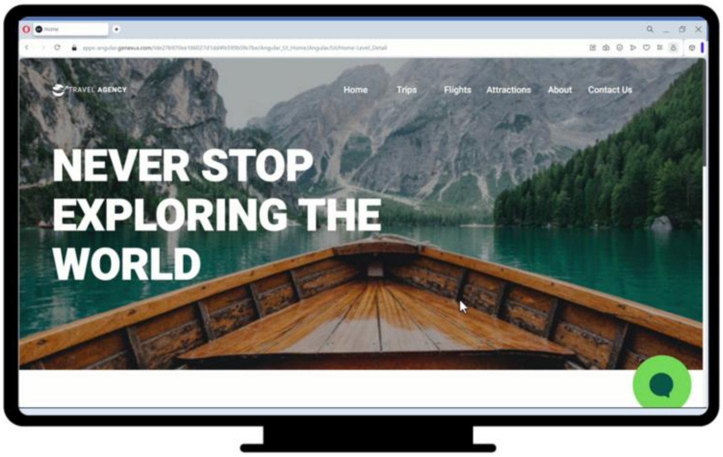
And we would do the same for the other DSO.



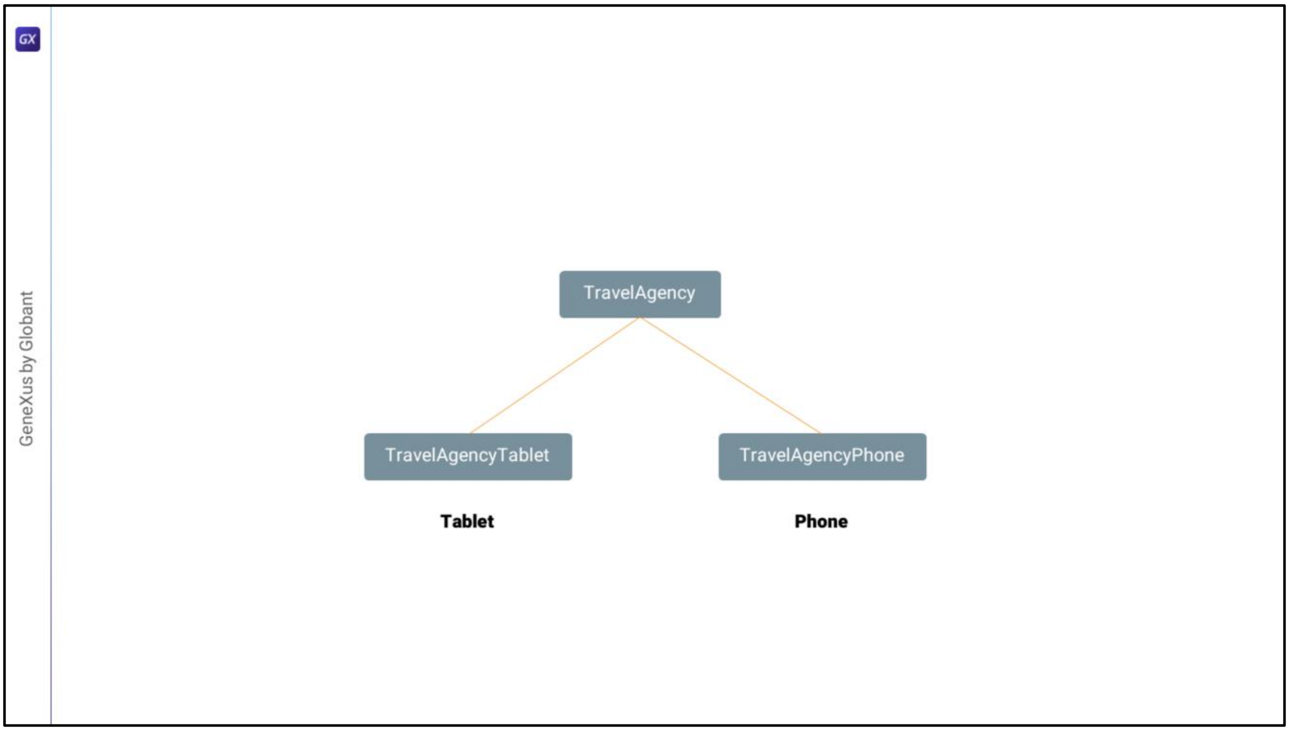
You may wonder why I got into this if I said that we start with one of the variations…

...and only later we develop the others. While this is true in general...

...previewing how we are going to implement these variations allows us to make early decisions that will make the system easier to maintain later on.



In the next videos, we will focus on Desktop web development and we will come back to all this at the end, when we deal with the other versions.



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TravelAgency

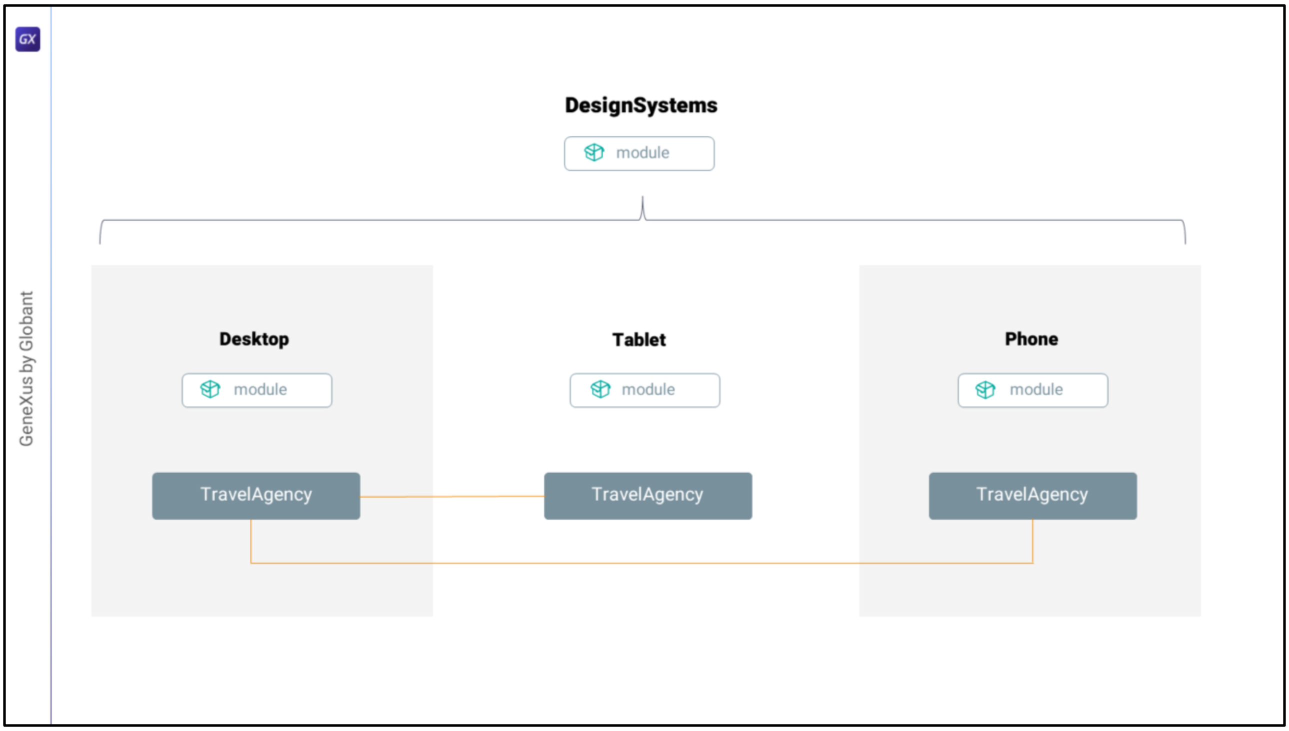
TravelAgencyTablet

TravelAgencyPhone

Tablet

Phone

In fact, I don't think this is exactly the organization I'll end up choosing....



...instead I'm going to place the Design System for each variation in a different module. That way I will be able to call them the same (the modules allow just that, that there are objects among them with the same name), and each module, conceptually, will implement the same, the TravelAgency design system, but each one for a different universe. One for desktop, one for Phone, one for Tablet. Of course one will be the model of the others, that is, they will not be completely independent.

But we are not going to think about this now. I'll simply leave an outline to analyze and solve it later, when we deal with these other variations. We will continue in the next video.

GX

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