

GeneXus Frontend Development



Cecilia Fernández



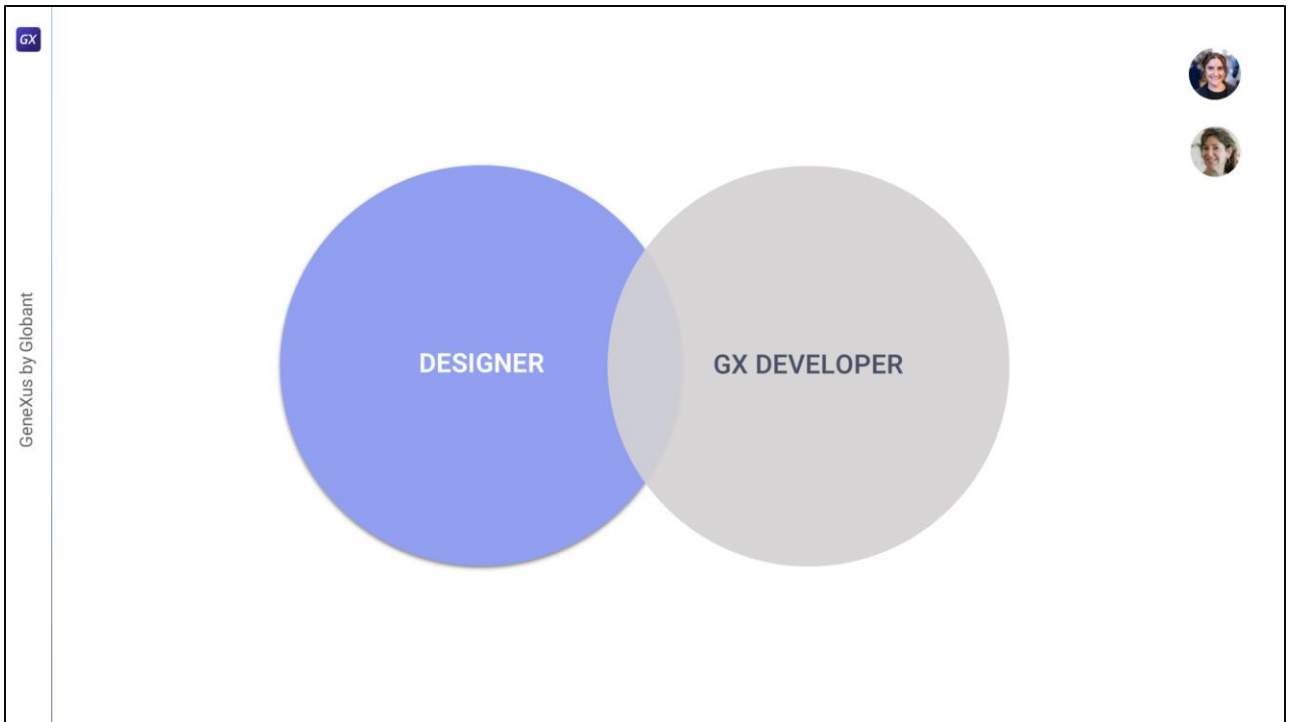
Cecilia Passalacqua



Introduction

Frontend: Between the designer and the developer

- Hello!
- Hello, welcome! In this first video, we want to tell you how this course will be developed in the following modules... what the objectives will be, what tools we will see and the final result after all this process.

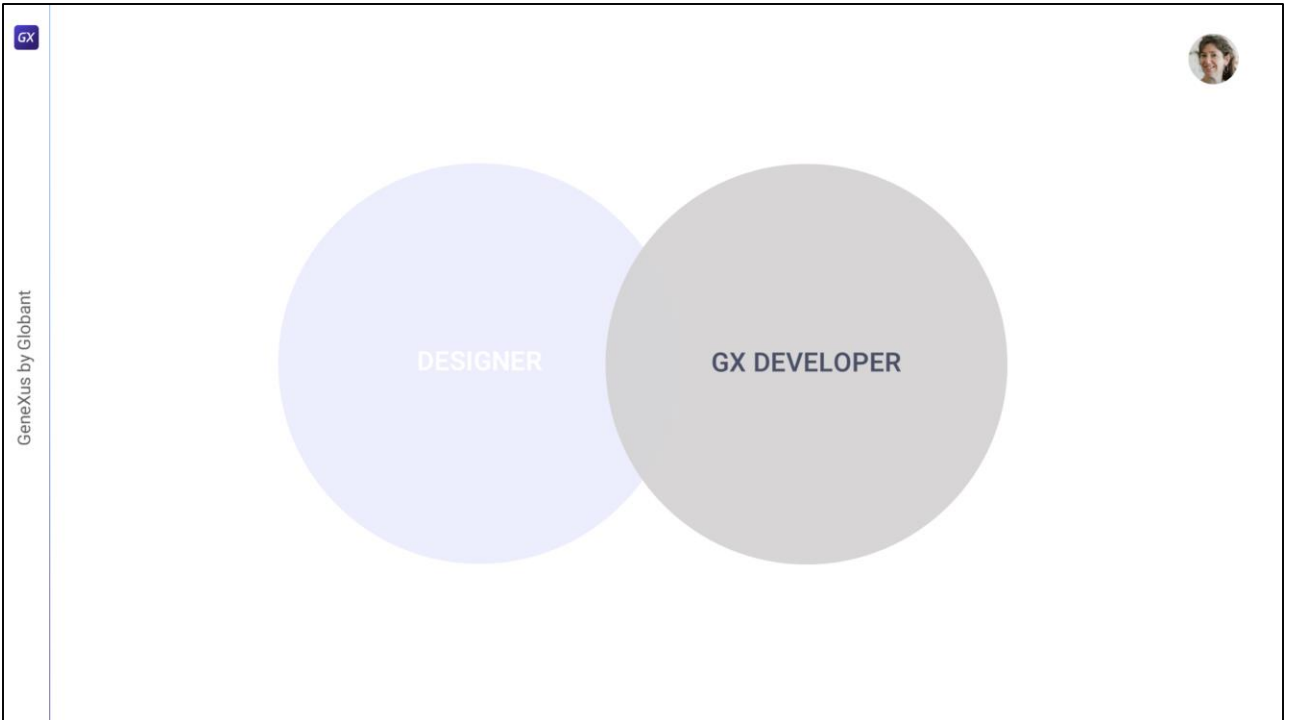


Let's start by introducing ourselves: as you may have noticed, we have the same name, so to identify each other throughout the course we will call each other Cecilia, Chechu, the designer, which is me. And Cecilia, Ceci, the frontender...

- That's me.

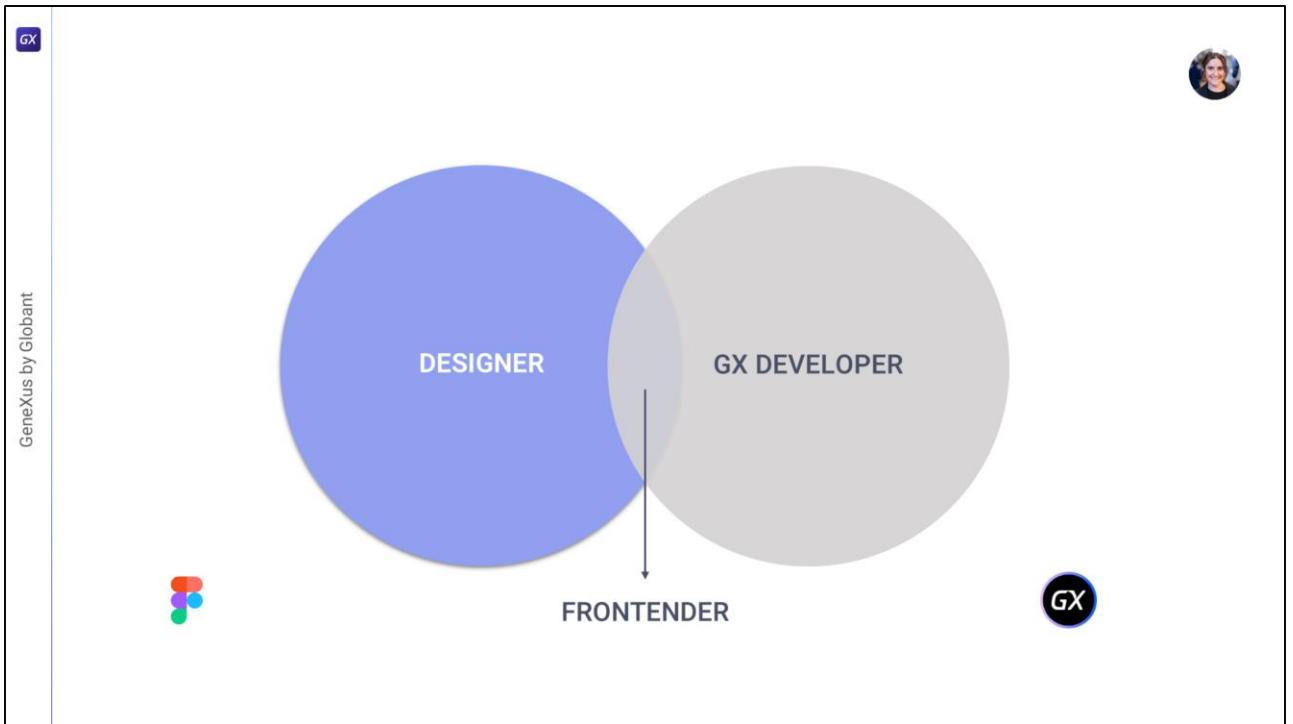
Well, I'm Chechu and for many years I studied graphic design but I've always been very interested in technology and design in technology. A couple of years ago I started working in GeneXus and I specialized in how to include design and the different ways to include design in our platform.

Now I'd like to introduce you to my colleague, Ceci, who isn't specialized in anything but is a great GeneXus developer and that's what she's going to talk about.



Well, now she praises me, but earlier she said “she is not specialized in anything”... and that's true. Actually, I have a broader GeneXus development profile. That's good because I had to learn many things that will be the key aspects we are going to see in this course, and which are focused on how to bring a visual and interaction design to GeneXus.

Why? To obtain an application that looks and behaves as expected.

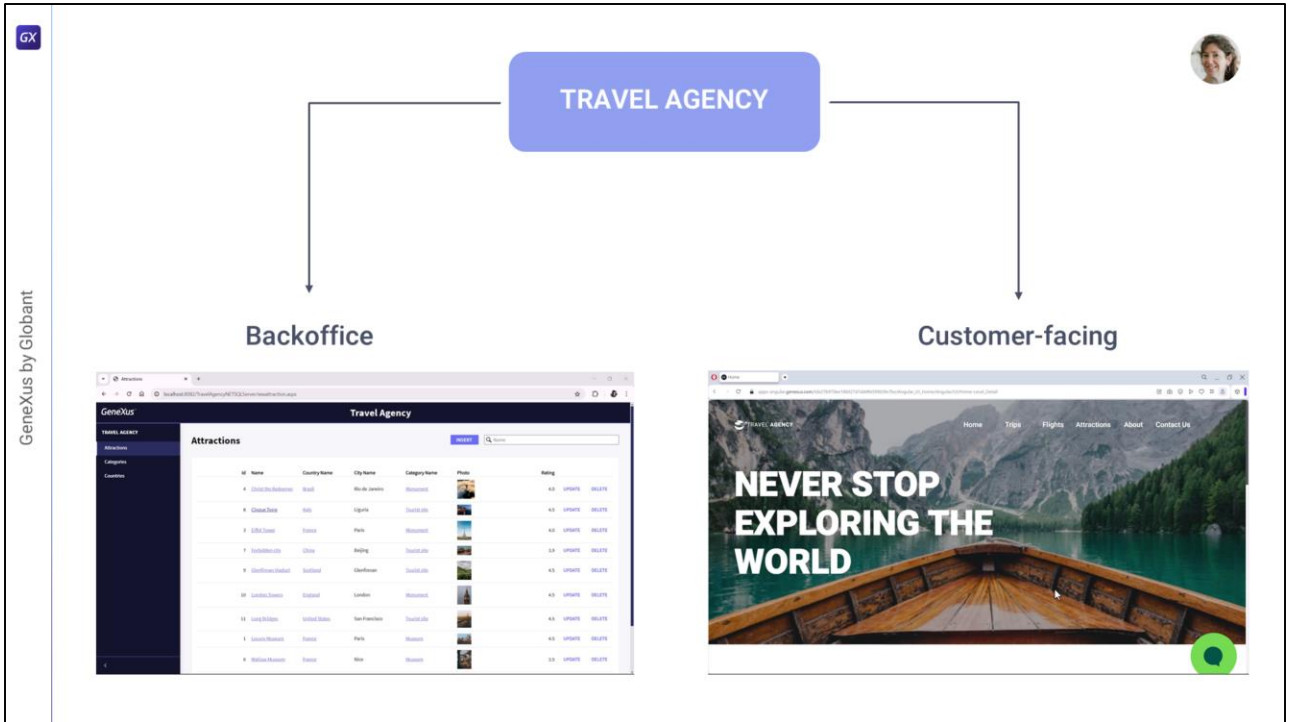


Okay, but although we will be focusing on the role of the GeneXus Developer, which is Ceci's role, it is necessary to understand that the Frontend is a gray area between design and development. As a frontender we need to know the mental model of the designer, the tools they use to express certain decisions, how they make certain decisions and above all their work tool, which in this case will be Figma.












Sample Travel Agency

So we are going to explain it in a practical way through an example that will be a customer-facing application called Travel Agency.



Well, and in that respect actually the application can be of two types: either we can build the backoffice application, or have the Customer-facing application which is the application for the end customer.

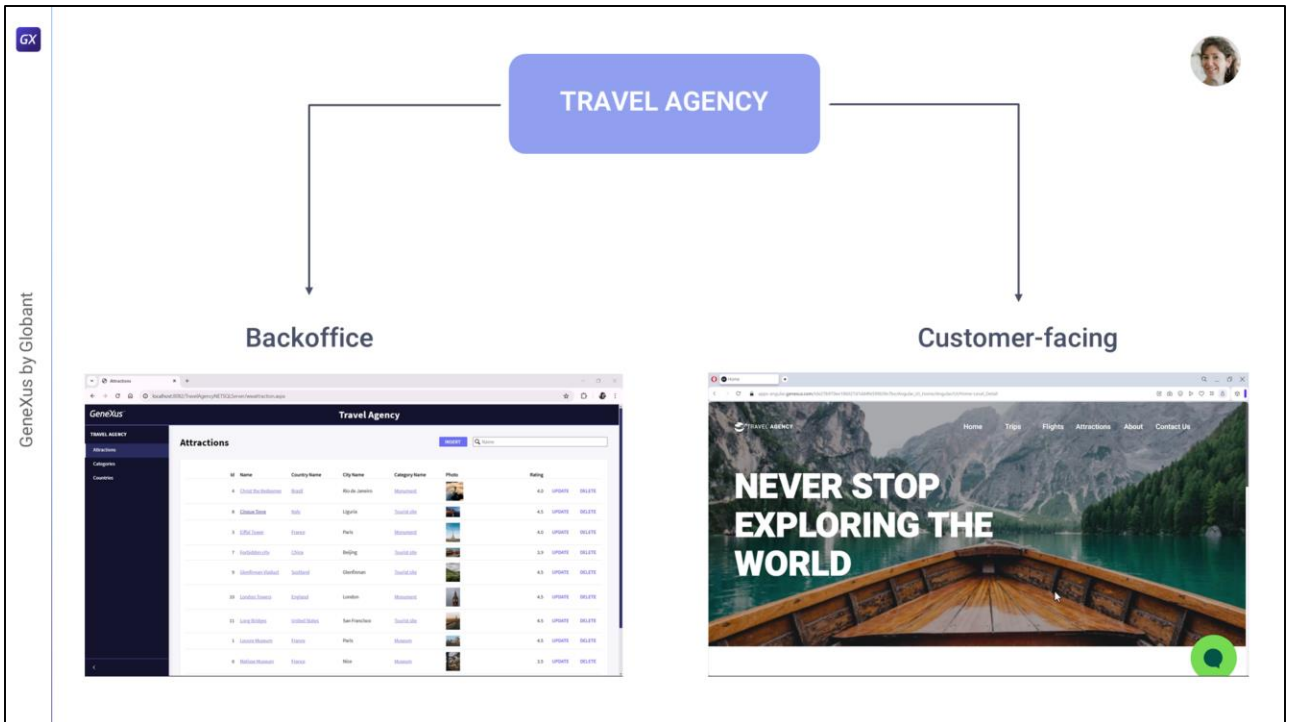
The screenshot shows a web application interface for a travel agency. The browser address bar indicates the URL is localhost:8082/TravelAgencyNETSQLServer/wwattraction.aspx. The application header includes the 'GeneXus' logo and the title 'Travel Agency'. A dark blue sidebar on the left contains navigation links for 'Attractions', 'Categories', and 'Countries'. The main content area is titled 'Attractions' and features a table with the following data:

Id	Name	Country Name	City Name	Category Name	Photo	Rating	UPDATE	DELETE
4	Christ the Redeemer	Brazil	Rio de Janeiro	Monument		4.0	UPDATE	DELETE
8	Cinque Terre	Italy	Liguria	Tourist site		4.5	UPDATE	DELETE
3	Eiffel Tower	France	Paris	Monument		4.0	UPDATE	DELETE
7	Forbidden city	China	Beijing	Tourist site		3.9	UPDATE	DELETE
9	Glenfinnan Viaduct	Scotland	Glenfinnan	Tourist site		4.5	UPDATE	DELETE
10	London Towers	England	London	Monument		4.5	UPDATE	DELETE
11	Long Bridges	United States	San Francisco	Tourist site		4.5	UPDATE	DELETE
1	Louvre Museum	France	Paris	Museum		4.5	UPDATE	DELETE
6	Matisse Museum	France	Nice	Museum		3.5	UPDATE	DELETE

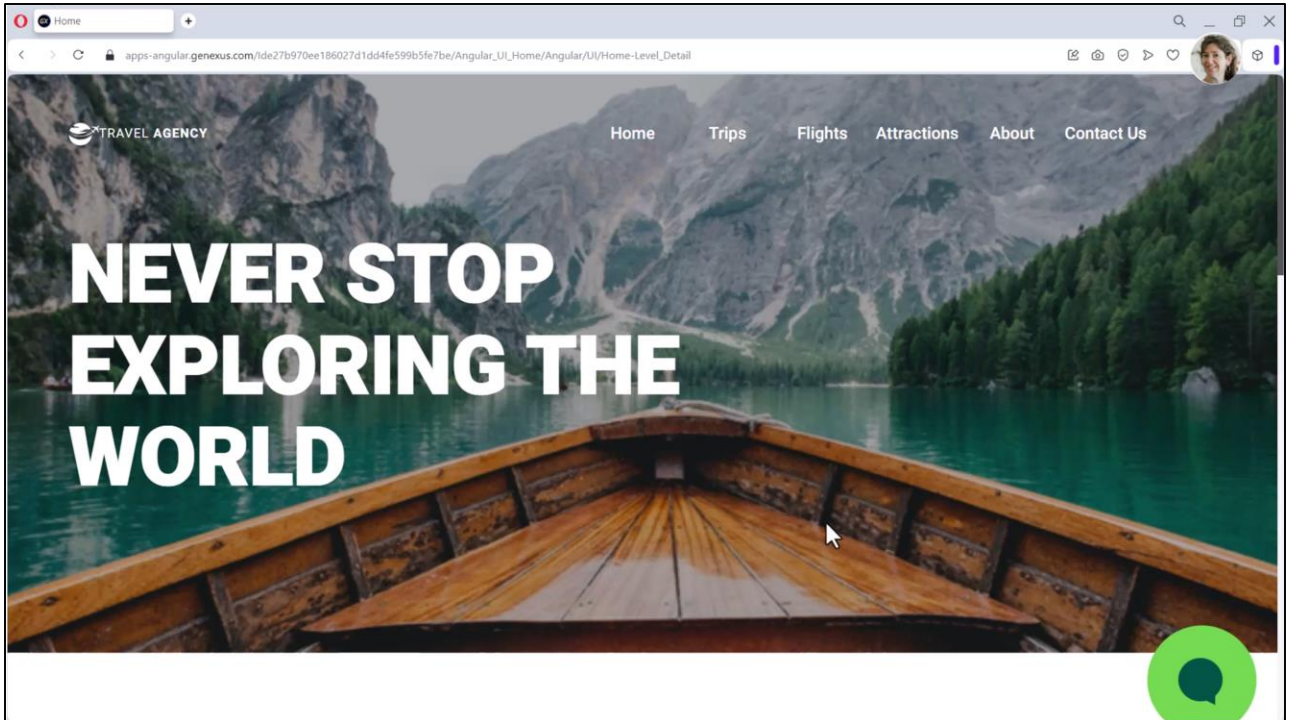
Considering the Backoffice one... here for example we are looking at three transactions: the three transactions we are going to work with that have the WorkWith pattern applied, so here we are looking, for example, at the "work with" tourist attractions... we see that the information is structured. Here is the "work with" the categories of tourist attractions and countries...

We have the actions to insert, update, delete for all three of them. Here in particular we can even view the information of a tourist attraction: let's look at that photo there of one of the tourist attractions, that rating that appears there, that title, because we are going to see it very soon... this information... we can also see this... these other ones: these photos also related to that tourist attraction... and well, why all this (here we see the photos in general of all the tourist attractions)...

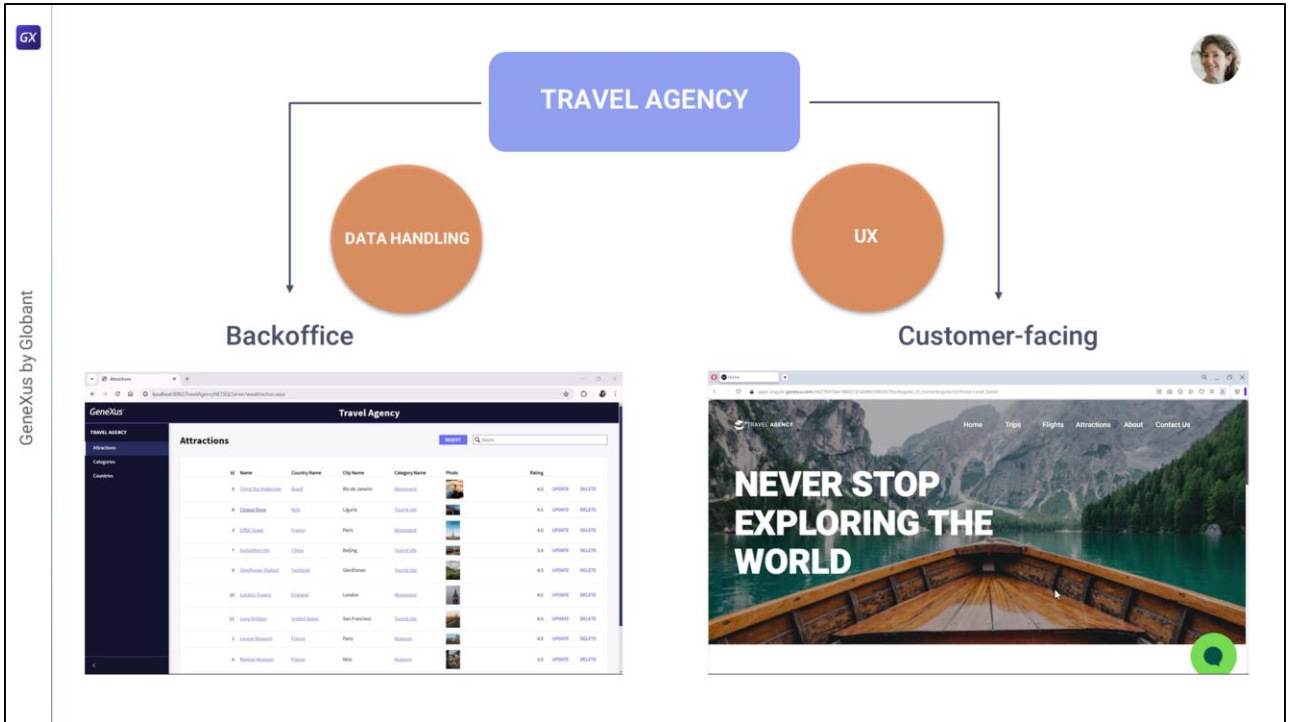
Well, this application, then, the backoffice structure...



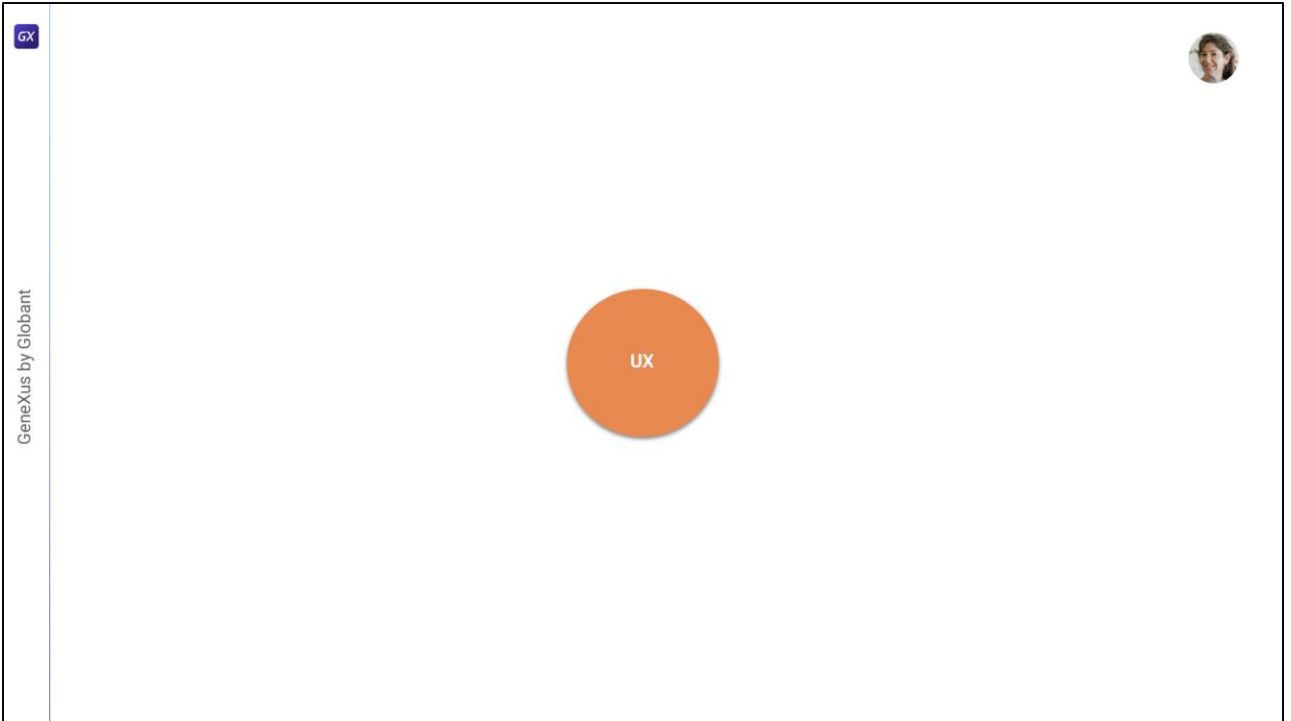
...is focused on managing the data in a very structured way and on the other hand we have the application...



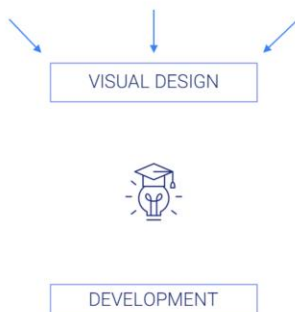
...which is the application aimed at the end customer. Here we are looking at the home page of this application, here we can see the tourist attractions and there, coincidentally, we are seeing the same pictures of the tourist attractions that we saw a few moments ago in the backoffice. Here for example is the rating of this tourist attraction and, if I go on, by clicking on it we can see the information that we have just seen. Here is a contact form where the user will enter information.



Well, then we would have these two types of applications. As we were saying, the backoffice one is focused on data management and the customer facing one for the end customer in which data management is much more limited, but the focus, where it has to stand out, is on the user experience. However, nowadays a good user experience is a must for all applications, not only those for end customers, but also for backoffice applications.



And that's going to be the main topic of our course, right? How to achieve, how to design a good user experience, or, rather, starting from a good user experience design, how to take that to GeneXus...



The process to achieve a good user experience design is a designer's task –in this case Chechu's– and in this course it will only be partially addressed. What we are going to see is the result of that stage.

The screenshot shows a web browser window displaying the GeneXus Core course page for 'UX Design, Introduction'. The browser address bar shows the URL: training.genexus.com/en/learning/courses/genexus/v18/core/~26354/ux-design-introduction. The page features the GeneXus training logo and navigation links: Learning, Certifications, Universities, Academic Partners, and Help. A search icon and a 'Login' button are also present. The main heading is 'GeneXus Core course' with the sub-heading 'Version: GeneXus 18'. Below this, the section 'UX Design, Introduction' is highlighted. A brief introductory text states: 'So far, we have only implemented behavior and nothing about the visual and navigation aspects of the application. Here is an introduction to the essential task of UX design and how it is carried out in GeneXus, with the example of Unanimio.' A video player is embedded, showing a video titled 'UX Design, Introduction'. To the right of the video player is a table of contents with the following sections:

- Screens and associated logic**
 - Web Screens with Back-office Focus, Introduction
 - Web panel object, First steps
 - Web panel object, Loading data and events
 - Web Panel Object, Event Execution Scheme
 - Grid Variables and Actions in the Work With Pattern
 - Web Panel Object, Multiple Grids
- Screen design and modeling**
 - UX Design, Introduction
- Version management and teamwork**
 - GeneXus Server, Introduction

The video player interface includes a 'DEVELOPMENT' button and a 'Total length of videos: 8h 30m' indicator. In the top right corner, a video call window is visible, showing two participants: 'Yecilia fernandez' and 'Cecilia Pazzalacqua'.

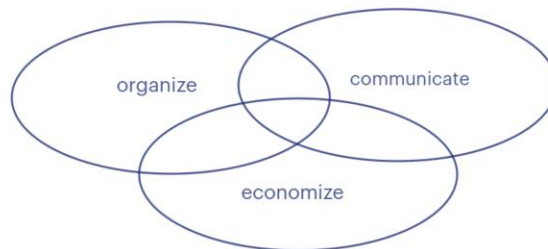
In another video of another course I had expressed all this in this way... Let's watch it and see what I was saying...



UX DESIGN



DEVELOPMENT



“The development of an application doesn't start with the development itself, it starts after a very important previous stage, which is the design of the user experience. There, the conceptual structure of the application as a whole is organized first, to obtain a product that meets the expectations of both the user and the business, that communicates what it has to communicate and in the most effective and economical way possible.

”



UX DESIGN

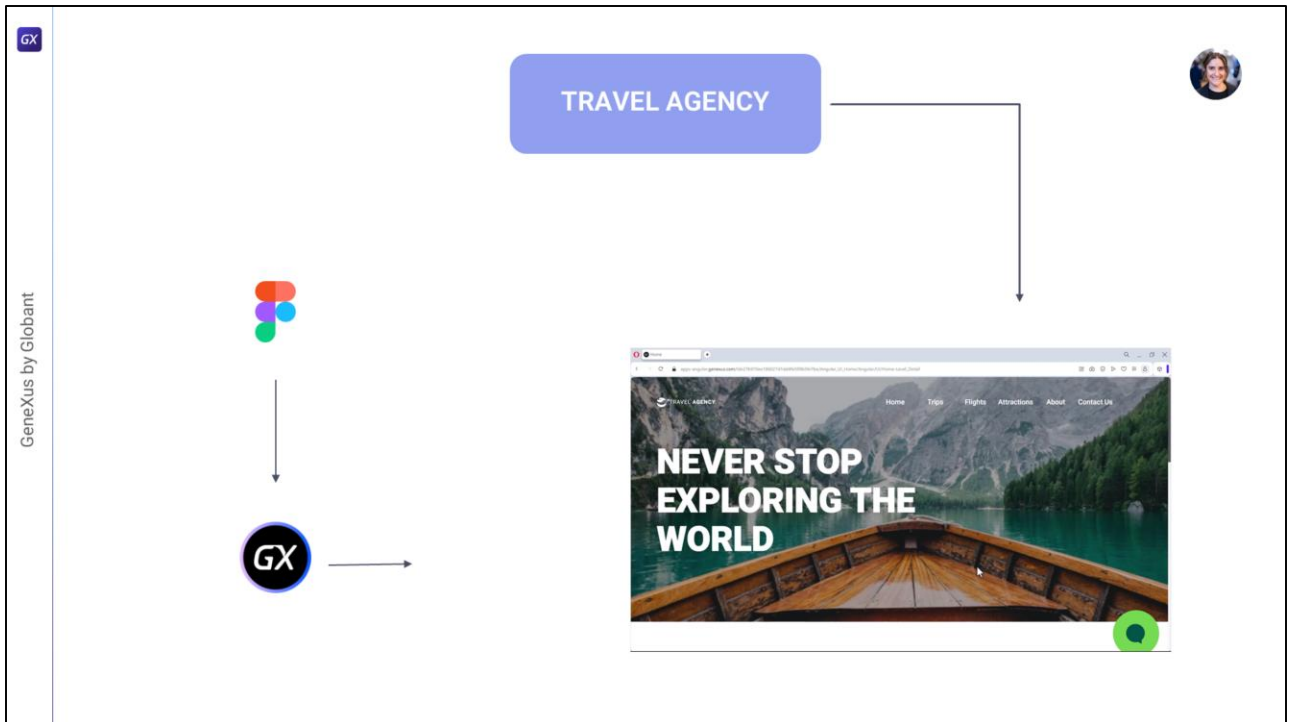


DEVELOPMENT

5	Surface	VISUAL DESIGN		
4	Skeleton	Interface design	Navigation design	Information design
3	Structure	Interaction design		Information architecture
2	Scope	Functional specification		Content requirements
1	Strategy	User needs & Business objectives		

This includes the design of the interface, the navigation, and the information. The visual design we see in the finished product is built on this organizational structure. Here we will not go into the details of this very important task, but we can appreciate that what we will end up seeing is the result of the foundations of these previous stages: each one as the basis for the next one.

Only when we have the resulting surface stage we will have the visual design to start the actual development.”

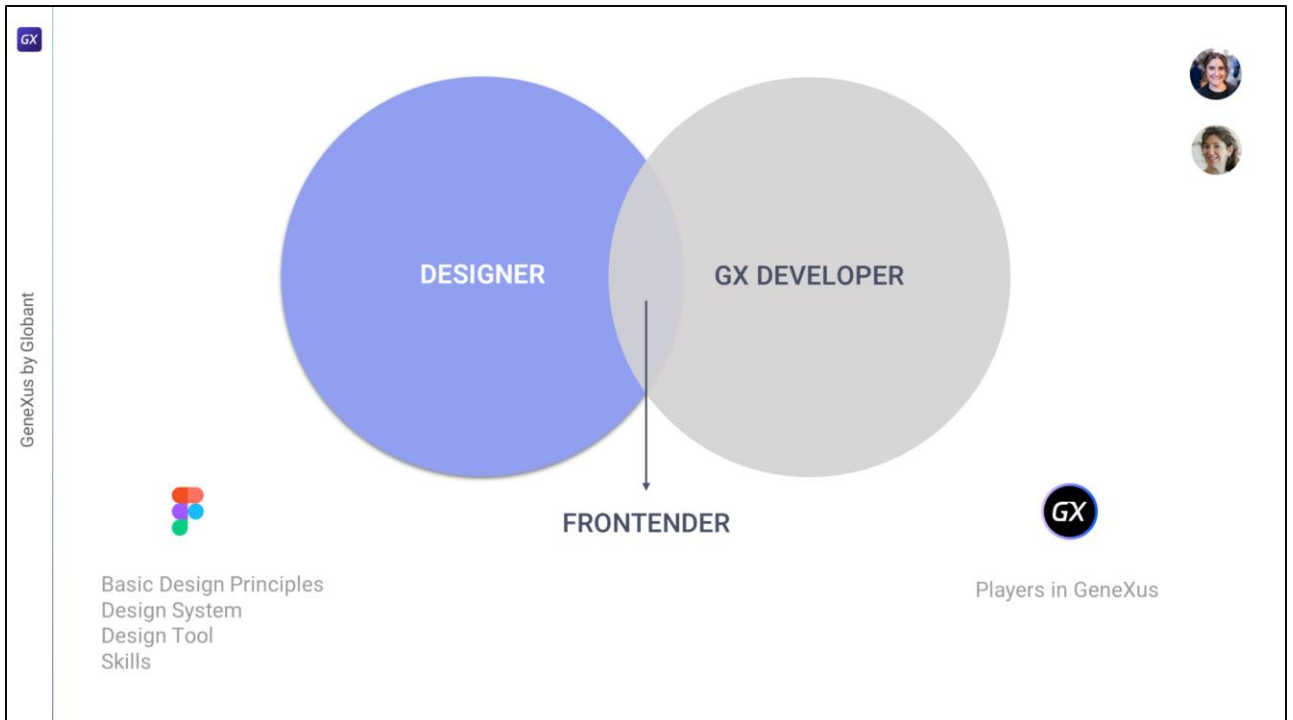


As Ceci was saying just now, this stage, or these stages prior to visual design or interaction design, are the responsibility of the designer but also of other agents, because it requires a deep analysis of the market, of what I want to communicate, of the needs I have, and also, above all, of the users who will be interacting with that product.

It is from this research stage that I, as a designer, start to make decisions and begin to translate them into the design that will later have an impact on the development.

After all these stages in which we will not delve into now during the course, I have enough information to start designing in my work tool, which as I mentioned earlier will be Figma (later in other videos we will delve a little more into that tool).

But once I finish the visual design and the design of the screens and interaction, I, as the designer, am able to pass the file to Ceci as frontender so that she can start to take certain elements and see how to match them in GeneXus with the players she has on the other side.



Therefore, we will say that it is essential for the frontender to know the designer's mental model and also their tools, where they express decisions, how they make them, what conversations, agreements, and discussions I must have, in order to generate the best possible product based on that design and user experience research.

- We will be having several discussions, we can anticipate that.

We are going to have several discussions and you are going to listen to them, because... the idea is that in this course and module by module you can follow them as well, you can see what is the link between a designer and a frontender, because we really have to sit down many times to discuss or ask directly: "hey, why did you put this here, what does it mean, where does it come from?" It is the only way for our development to be efficient and for us to have a more consistent product.

- There it is, and besides, it is part of what we want to show, precisely, that it is not that one person's task is finished and the other one passes the package to another one to do what they can, but that it is a task that will require multiple conversations, back and forth, to be in a continuous interaction, right? It will be noticeable in the course videos.

Yes, in fact we always say that as designers our work does not end when I send the file to the frontender, but it ends when the product is released and goes out into the real world. As designers we should be involved during the whole process precisely to fine-tune certain processes or certain issues to be as efficient and above all more sustainable and maintainable

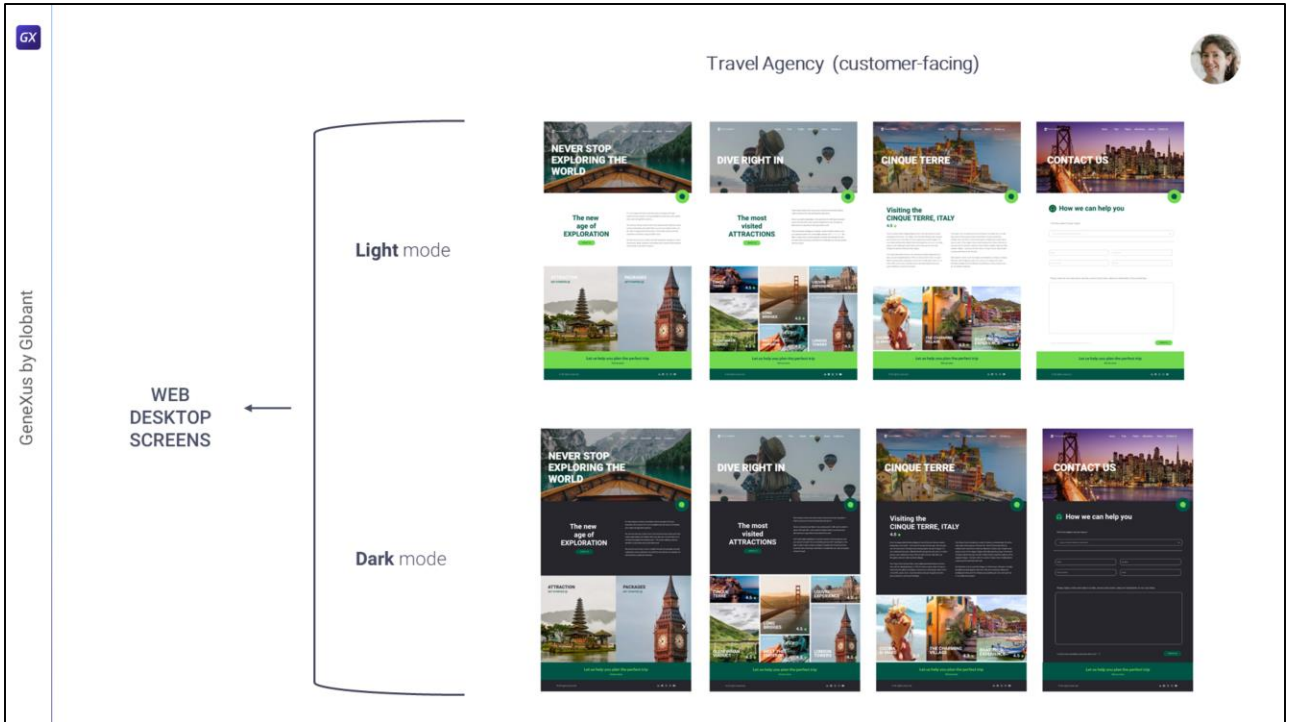
in the future, which is the goal and also a little bit the core of GeneXus, right? To have a product that I can update easily and that I can make it grow if I need to. Well, to do all that I need to do all this beforehand...

- Exactly.



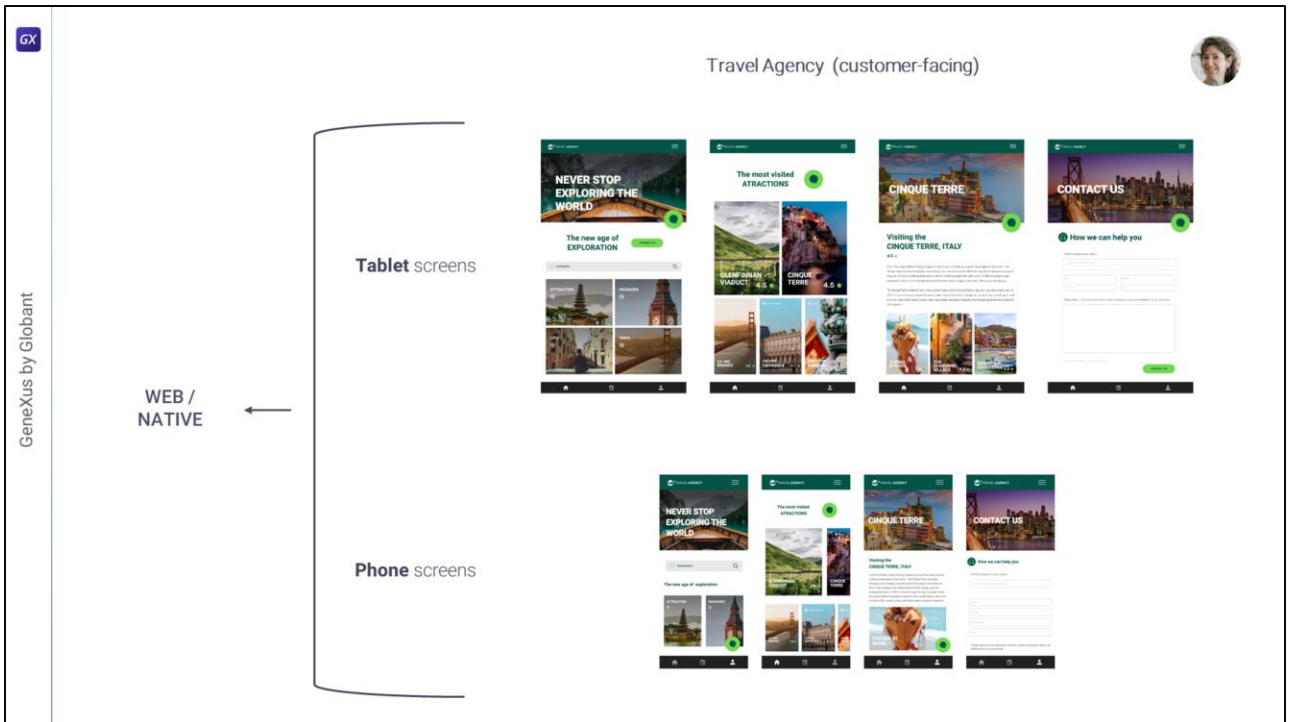
Scope

Well and then let's look at the scope, the scope of what this course is going to be.



The objective is to gain all the necessary knowledge to implement in GeneXus the customer-facing Travel agency application that Chechu is going to design for us.

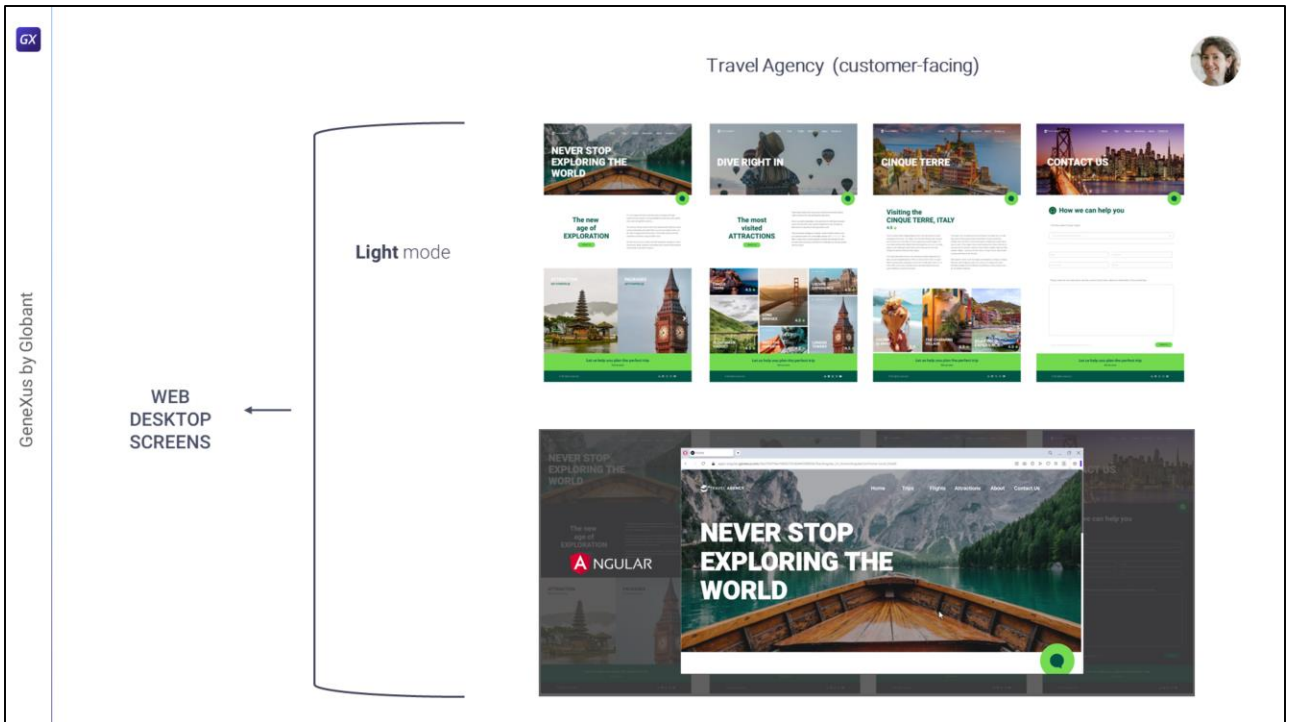
Chechu is going to design it for desktop size...the web application, in light mode. Then we will also have the application, also for desktop size, in dark mode.



In addition, Chechu is also doing all her work, she will also have designed the application for tablet size, both web and native application...as well as for phone size.

Since you have to start somewhere and we are not going to do everything at once, well, in general one chooses which of these variations will be the one to focus on at the beginning of the development.

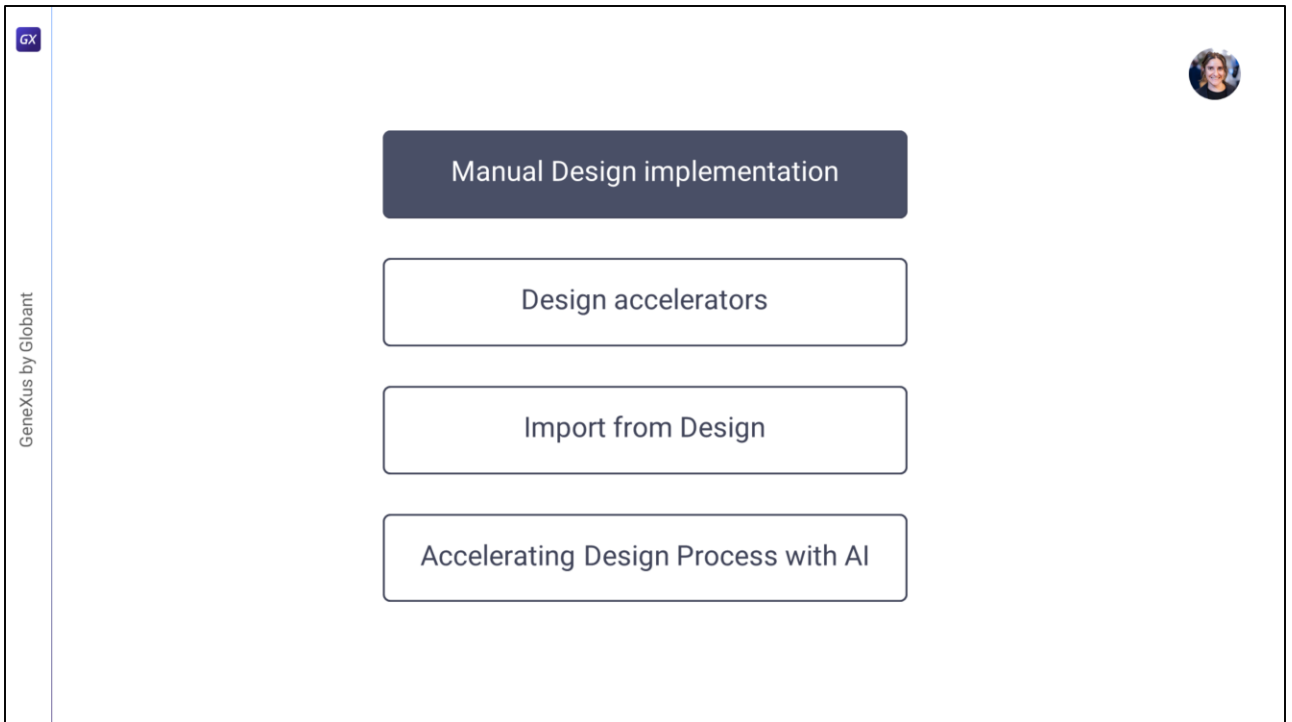
In general that also depends on what the client requires first.



In our case, we will start with the desktop web application, and we will implement it for Angular.

So, most of the course development, the whole first part, is going to be focused on that and then we will be doing the dark mode and also the other screen sizes. And also the platform variation between web and native (we hope to get to that at the end of the course; I don't want to promise anything because I don't know if we will have the time, but well, we will try).

- We will have enough time, don't worry.



Well, before closing this introduction we wanted to make about the course, I thought it was important to tell you that within GeneXus we have several strategies to add design to a product that we are generating.

We are going to focus on the manual implementation, and now we will explain why, but there are other ways, for example:

- accelerators from Design Systems such as GeneXus Unanimo or those generated by community partners,
- we also have the Import From Design tool that we generally use with Figma or with Sketch from a design generated with certain conventions; I can import it directly into GeneXus and then I can use those elements,
- and we also have some AI accelerators of the design process to work precisely in GeneXus.



Modeling Design in GeneXus: A map for corporate Unified Design Strategy



About that, there is a talk that was given during the GX30 event that we are going to share with you because it is very interesting, and if we are interested in this world we have to know all the tools we have available to start choosing which one I feel more comfortable with or which ones apply to each case. I can't always use them all, but it is important to know the range of options I have.



Why Manually?

Okay, so why did we choose to teach this course on manual implementation? Because any of the other strategies at some point will require me to implement manually, whether I import, whether I use a DSO, whether I use a Figma plugin as an accelerator, at some point I will end up detaching from those accelerators and I will have to go to GeneXus and I will have to work with GeneXus objects, so what better way to learn how to solve accelerator problems than to use manual implementation?

That is why this course is focused on that and we put a lot of effort in working on the granularity of the elements within GeneXus, so that later on, whichever strategy you choose, you can solve the problems that come up along the way.

-There it is, for that you must have implemented the system at least once. With that, we have already come a long way.



Recap

GeneXus Frontend Development

So, as a summary of this short introduction to the course, we want to tell you that in the following videos what you will be doing is: with me, seeing the design in Figma and with Ceci seeing how to translate that design to GeneXus to generate a digital product within GeneXus that takes into account the entire user experience analysis stage, all the decisions made by the designer in their tool and also how I can make that design effective and cost-saving so that I get an efficient digital product.

- Well, that being said, that's all, isn't it? We hope you join us and that you find the course useful. And if you have any questions, please write to us.

- Thank you.

- Bye, bye...

GX

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