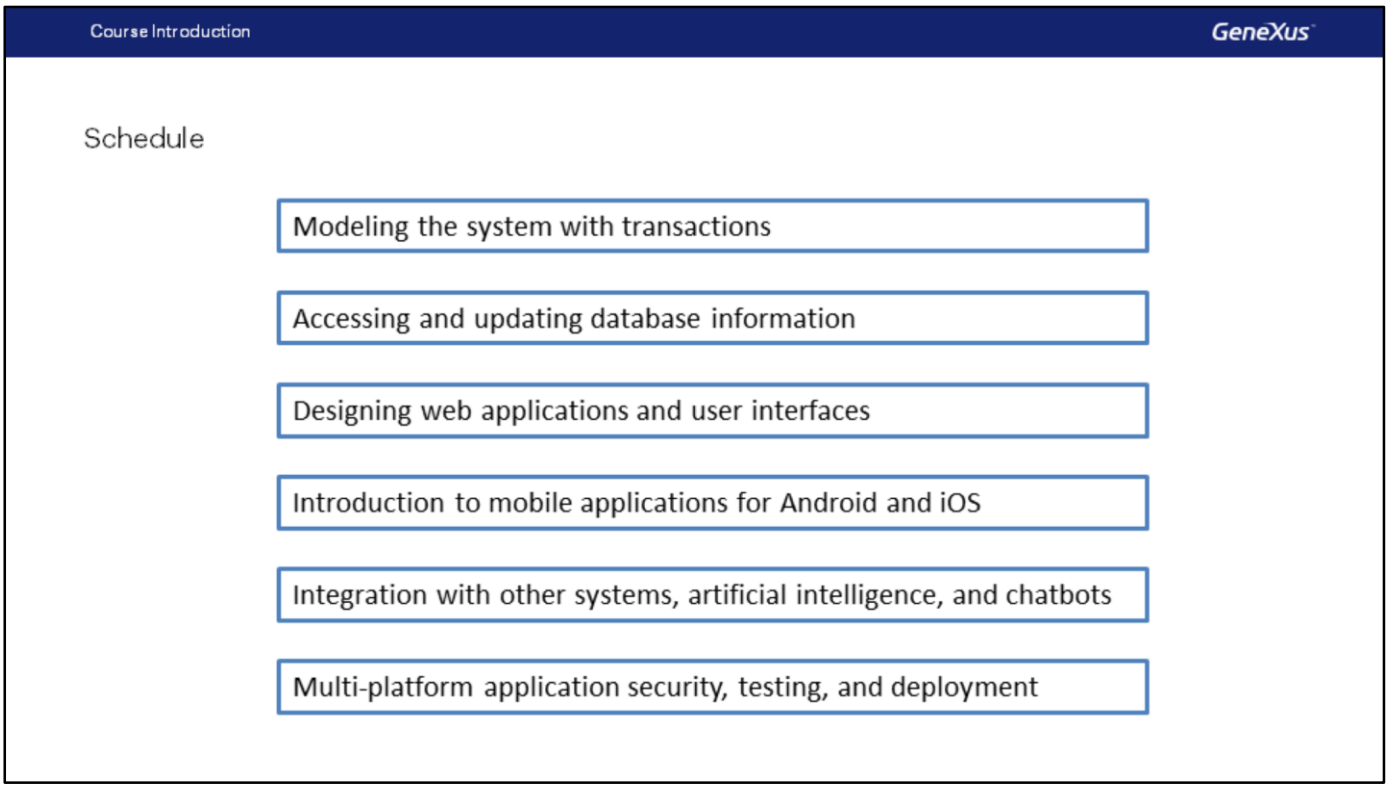
Course Introduction

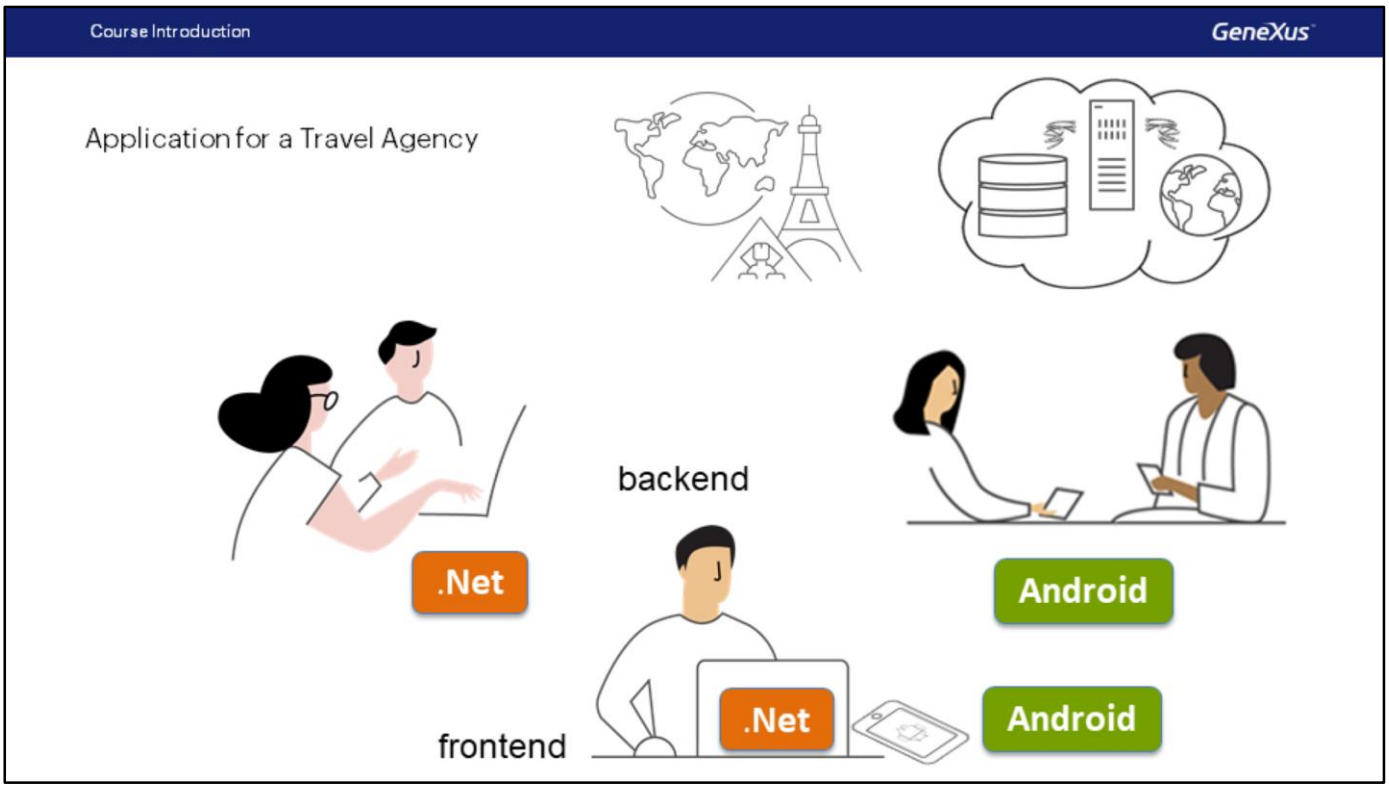
GeneXus 16



The following are the main topics that we will be developing throughout the course.

We'll start with:

- **Modeling the system with transactions**: Here we'll see how to create a GeneXus project (called Knowledge Base), as well as how to identify the system's entities and model them in GeneXus using the transaction object.
- **Accessing and updating database information**: We will study several objects to access the database, display their information on screen or in lists, and how to modify the stored data. We will also see the interaction between objects and the creation of complex data types.
- **Designing web applications and user interfaces**: Here we will learn how to create eye-catching screens, focused on achieving the best user experience in web applications.
- **Introduction to mobile applications for Android and iOS**: We'll see how to quickly create an application for Smart devices that accesses the same data as the web application.
- **Integration with other systems, artificial intelligence, and chatbots**: Here we'll learn how GeneXus is capable of interacting with other applications; for example, by accessing several databases, importing a dll from .Net or through web services. Also, how to use artificial intelligence for image and text recognition, or how to use chatbots in our applications.
- **Multi-platform application security, testing, and deployment**: Finally, we will learn how to perform tests to check if our application works as we want and how to make it a secure application. We will also see how to generate in different languages and for different databases, and how to deploy our application, both on local servers and in the cloud.



To address the topics of the course, we will be developing an application for a Travel Agency.

Part of the application will be used only by the staff of the travel agency (backend) to enter data about the countries, cities and tourist attractions they offer, as well as information on flights, customers and so on. We will also include a part for end users (frontend), which will allow them to query the tours available and the main tourist attractions offered by each city. Both the backend and frontend will be developed for a web environment, and some functions of both parts will also be available for access from mobile devices.

As we saw at the beginning of the course, GeneXus is multi-platform; that is to say, we will be able to generate our application in different programming languages, for different platforms and for different databases.
For the web part we could choose to generate the source code in Java or .Net. We'll use .Net because it is the language available in the trial version that was used to work on this course.
GeneXus offers a Full version and a Trial version. The trial version doesn't include all functions and restricts the total number of GeneXus objects that can be included in our project, but it is completely free. In order for everyone to be able to take this course, we'll always use the Trial version, except to explain some specific topics.

For the module on mobile devices we could generate apps for Android cell phones or tablets, or for iOS that is used in the iPhone or iPad; both platforms are available in both the trial and full versions. In this course, we'll use Android.

GeneXus also makes it possible to generate the application in the cloud, which saves us from installing the software for the web server and the database on our computer, as would be the case if we wanted to work locally.

More specifically, with the trial version we can only prototype in the cloud (GeneXus uses the Amazon cloud), but this will greatly simplify the installation and will allow us to access the data entered into our application from mobile devices.

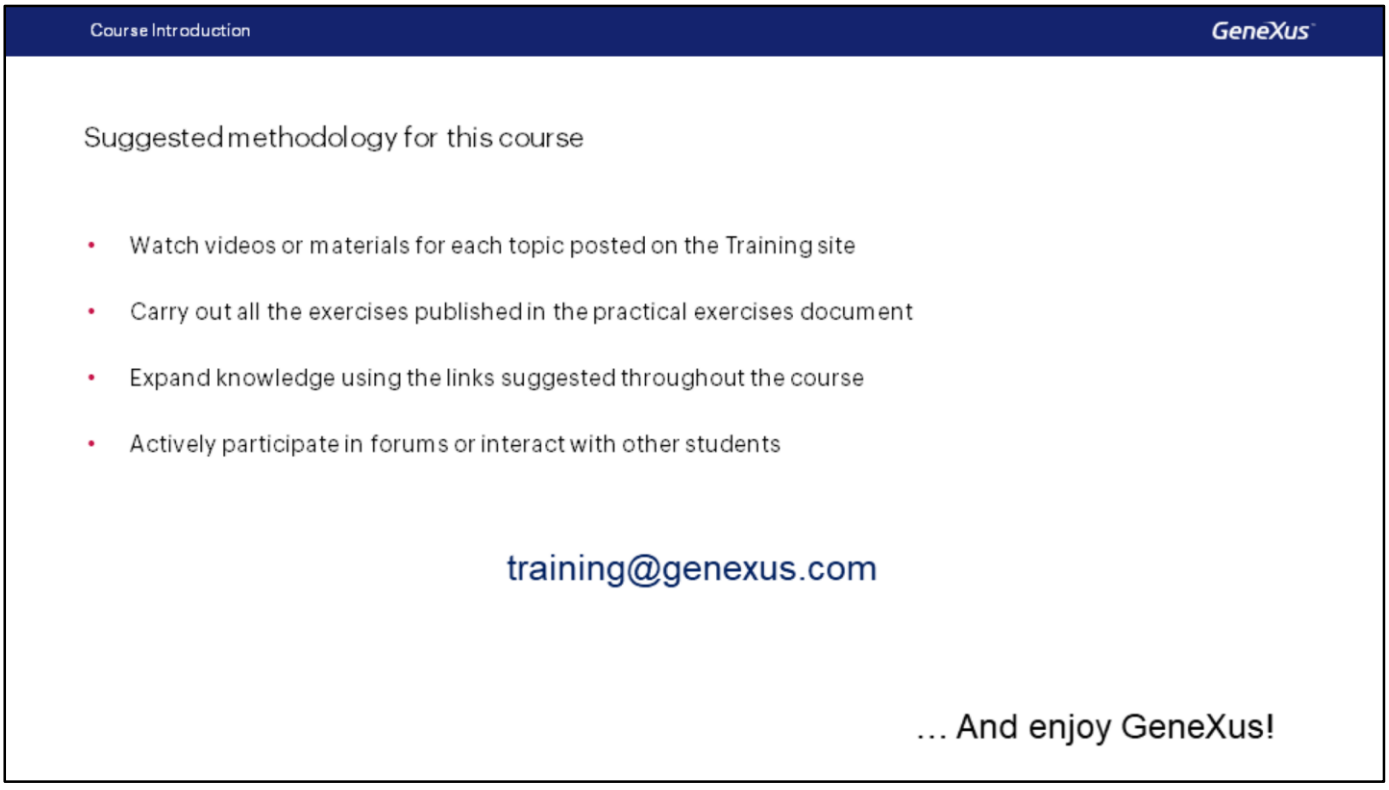
To record all the changes made to our application, we'll use GeneXus Server.

GXServer is recommended for a single person developing the application and for developers working in teams.

Its many benefits include:

- The possibility to work freely, knowing that nothing will affect the application backup on the server.
- A historical record of changes.
- The ability to easily integrate new developers to the team, even if they are physically far away from us.
- Manage the knowledge base development from a central panel...

... and other benefits that we will see later.



Finally, we suggest using the following work method:

- Watch videos or materials for each topic posted on the Training site
- Carry out all the exercises published in the practical exercises document
- Expand your knowledge using the links suggested throughout the course
- Actively participate in forums or interact with other students

If you have any questions related to the course materials or methodology, please send an email to training@genexus.com.

… And enjoy GeneXus!

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