



Enterprise Computing Solutions - Education Services

## OFERTA FORMATIVA

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## Developing Applications Using Informix 4GL

| CÓDIGO: | DURACIÓN:         | Precio:   |
|---------|-------------------|-----------|
| IX101G  | 32 Hours (4 días) | €2,200.00 |

### Description

Get an introduction to the powerful features of Informix 4GL, a complete fourth-generation application development language. Using Informix 4GL, build an integrated application that features easy-to-use menus, data entry screens, reports, and online help, all with significantly less code than conventional programming languages require.

**Course Materials** The course materials address Informix 4GL 7.50.xC3. **Hands-On Labs**

Twenty-six labs are included to provide practice in developing applications with I-4GL 7.50.xC3. **Training Path**

This course is part of an IBM Training Path. Taking this course in the recommended sequence allows you to maximize the benefits from your education.

If you are enrolling in a Self Paced Virtual Classroom or Web Based Training course, before you enroll, please review the **Self-Paced Virtual Classes and Web-Based Training Classes** on our Terms and Conditions page, as well as the system requirements, to ensure that your system meets the minimum requirements for this course.

- <http://www.ibm.com/training/terms>

### Objetivos

- Develop custom applications using IBM Informix 4GL
- Create custom menus
- Create custom data entry forms
- Effectively use SQL statements in your application
- Incorporate error handling routines into your application
- Integrate on-line help facilities into your application
- Use transactions in your application
- Produce custom reports
- Use screen arrays
- Insert multiple rows using arrays
- Execute dynamic SQL statements
- Lock database rows during updates
- Deploy 4GL functions as Web services

### Público

This is an intermediate course for application developers, database and system administrators, project leaders, and technical support individuals.

### Requisitos Previos

You should have:

- Previous programming experience
- Experience in using Structured Query Language (SQL)
- Experience using UNIX or Linux is recommended

### Programa

## IBM Informix 4GL and the IBM Informix Toolset

- Explain to others how IBM Informix 4GL fits into the client/server architecture of IBM Informix products
- Tell the difference between the compiled IBM Informix 4GL C Compiler Version and IBM Informix 4GL Rapid Development System.

## Basic Components of IBM Informix 4GL

- Define the terms: PROGRAM, MODULE, FUNCTION, and FORM
- Understand how these components make up an IBM Informix 4GL program

## IBM Informix 4GL The Programmer's Environment

- Navigate through the IBM Informix 4GL Programmer's Environment menu
- Choose the appropriate menu option for a given task
- Use the alternative command-line options to create programs

## Procedural Logic

- Use IBM Informix 4GL syntax for decision logic, including IF statements and CASE statements
- Follow IBM Informix 4GL syntax for logic loops, including WHILE loops and FOR loops

## Screen Interaction Statements

- Describe the features of the following IBM Informix 4GL statements: ERROR, MESSAGE, DISPLAY, and PROMPT
- Modify default display characteristics for these statements using the OPTIONS statement

## The MENU Statement

- Use the MENU statement to create an IBM Informix 4GL ring menu
- Suggest a menu path to a user
- Create hidden menu options
- Hide or display specific menu options

## Creating a Help File: The mkmessage Utility

- Use the mkmessage utility to compile a customized Help file for your application
- Understand the menu used when your Help file is invoked
- Change the default Help key
- Include a Help option in a 4GL statement

## Forms in IBM Informix 4GL

- Create a default form
- Select a table for a form
- Modify a default form
- Specify attributes for a form
- Compile a form

## Displaying Forms and Windows

- Display a form to the screen
- Open a window on the screen
- Use the statements associated with clearing windows
- Use the statements needed to release the memory used by forms and windows

## Data Types in IBM Informix 4GL

- Use the different data types in IBM Informix 4GL

## Defining Program Variables

- Define the appropriate variables for your program
- Understand the scope of program variables
- Know which data types can be used to define a variable in your program

## The Input Statement

- Use the INPUT statement to enter information into program variables
- Change the default options for accepting data entry from end users

## Using Clauses with the INPUT Statement

- Controlling the movement of the cursor through a form based on user input
- Using the value entered in one field to calculate a value for another field
- Invoking field level help through the use of special built-in functions

#### The Insert Statement

- Take the values entered by a user and insert them into a database table

#### The SQLCA Record

- Recognize the variables that make up the SQLCA record
- Understand how SQLCA record can be used

#### Trapping Errors with the WHENEVER Statement

- Tell the program that you will test for errors in your IBM Informix 4GL program
- Recover from errors in your IBM Informix 4GL program
- Use a compile switch to change the condition of error handling

#### Trapping User Entered Interrupts: The DEFER INTERRUPT Statement

- Trap the interrupt signal during data entry

#### A Review of the SELECT Statement

- Use a simple SELECT statement to return one row from the database
- Understand the syntax for more complex SELECT statements

#### Verifying Data in IBM Informix 4GL

- Make code reusable
- Call a function within an expression
- Verify that data being entered by an end user exists in one table before allowing it to be added to another table
- Use the SQLCA.SQLCODE variable to see whether a row was returned by a SELECT statement

#### An Overview of Cursors

- Name the three types of cursors
- Use the appropriate cursor for a given task

#### Transactions in IBM Informix 4GL

- Define a transaction
- Use the BEGIN WORK, COMMIT WORK, and ROLLBACK WORK statements in a transaction

#### Using Scroll Cursors

- Use a SCROLL cursor to retrieve rows from the database
- Use the features of a SCROLL cursor to browse through the selected rows
- DECLARE a cursor WITH HOLD when using transactions

#### Query by Example: The CONSTRUCT Statement

- Use a CONSTRUCT statement so that end users can query-by-example

#### Row Locking: FOR UPDATE Cursor

- Use a cursor declared FOR UPDATE to lock a row while it is being changed or deleted

#### Deleting Rows in IBM Informix 4GL

- Implement the code necessary to delete a row from a table
- Verify that a row can be deleted
- Prompt the user for assurance of a delete

#### Database Updates in IBM Informix 4GL

- Let the user access a form to change information
- Update a row in a database

#### The PREPARE Statement for Optimization

- Use a PREPARE statement to increase the speed of execution for a DELETE statement

- Use a PREPARE statement to increase the speed of execution for an UPDATE statement
- Use a PREPARE statement to increase the speed of execution for an INSERT statement

#### Scroll Cursors and Stale Data

- Use a SCROLL cursor to SELECT a primary key
- Use the primary key from a SCROLL cursor as an index for a nonscrolling cursor

#### Forms that Use Arrays

- Create a form that uses an array
- Define a screen array for a form that uses an array
- Open and display a form with an array

#### The INPUT ARRAY Statement

- Define a program array of records
- Use the INPUT ARRAY statement to allow the user to enter data
- Use the INSERT statement to transfer the program array record values into a database table

#### Clauses Using INPUT ARRAY

- Control the movement of the cursor through the elements of an array based on user input
- Use the value entered in one field to calculate a value for another field
- Use library functions to verify information during the input

#### Displaying Arrays and Pop-up Windows

- Select data from the database into a program array
- Use the DISPLAY ARRAY statement to allow the user to scroll through the set of data
- Populate a program array to be used in a pop-up window
- Implement a pop-up window to display a list of valid values for a field on a form

#### Reports in IBM Informix 4GL: Creating a Report Driver

- Create a report driver using the statements: START REPORT, OUTPUT TO REPORT, and FINISH REPORT
- Create a default report using the REPORT function

#### The REPORT Function

- Use the REPORT function to format the rows received by the report driver
- Use the seven control blocks of a report to achieve the desired appearance of a report

#### Advanced Report Concept: Two Reports from One SELECT

- Use one SELECT statement in two reports
- FORMAT the same information in two different reports

#### Advanced Report Concept: Using Variables to Name Output Files

- Use a variable to name an output file
- Use information supplied by the user to create the sort key for a report

#### Informix 4GL Applications as Web Services

- Define Web Service and Service-Oriented Architecture
- Describe the process of deploying a 4GL application to a Web service
- Configure the 4GL development environment for Web services
- Use the 4GL tools to manage components, compile, and deploy functions as Web services

## **Fechas Programadas**

A petición. Gracias por contactarnos.

## **Información Adicional**

Esta formación también está disponible en modalidad presencial. Por favor contáctenos para más información.