

At the end of the course, the participant will be capable of building applications for mobile devices in online and offline mode for deployment on iOS, Android, and Windows systems.

Prerequisites

Knowledge of Windows OS, knowledge of basic OOP programming principles and of any object-oriented programming language, basic knowledge of relational databases and SQL language.

Basic knowledge of the IN.DE development environment; you have already created small Web projects.

Course program

Lesson 1: Development environment, Mobile interface and introduction to Document Orientation

- Environment interface
 - Development environment interface
 - Definition of the basic objects for Instant Developer programming
 - Instant Developer project
 - Organizing folders and code
 - Introduction to Components
- Database
 - Database to be preferred depending on the application mode
 - Online only
 - Offline only
 - Online and Offline
- SQLite database
 - Differences from SQL Server / Oracle etc
 - Database performance
 - Software requirements for development machines
- Device user interface
 - User interface for tablets
 - Split View template
 - Form types: Left docked, Popover, Modal
 - Menu type: side bar
 - User interface for smartphone
 - Conversione between form types
 - Menu type: grouped
 - Device rotation interface
- Creating a mobile application
 - Mobile application properties
 - Mobile application themes

- Document Orientation
 - Definition of Document Orientation
 - Benefits switching from table orientation to Document Orientation
 - Definition of Class, Property, Method, Event
 - Definition of the IDDocument class
 - Document Orientation services definition
- Forms and Panels
 - Creating a form
 - Creating a panel
 - Mobile panel properties

Lesson 2: Forms and panels

- Different dynamics for panels in Web and Mobile applications
- Login and related events
- ScreenZone
- Panel layout
 - Field groups
 - Editing in Detail and in List
 - Scrollbar in List
- Visual controls
 - Date / Time controls
 - Numeric panel fields
 - Field tooltips
- IMDB tables
 - Working with in-memory tables

Lesson 3: Loading and saving

- Documents and panels
 - Panels: manipulating documents
- Loading and saving
 - Loading documents
 - Document states: inserted, modified, deleted
- Saving documents
 - Validation
 - BeforeSave
 - AfterSave
- Collection of documents
 - Definition of an IDCollection
 - Set a Collection as a property of documents
 - Transient collection definition
- Loading a collection
 - Using the LoadCollectionFromDB function
 - Using the LoadCollectionByExample function

- Document Orientation
 - Implementation of the document identification service
- Data Synchronization
 - Document synchronization service
 - Implementing Client synchronization
 - Implementing Server synchronization
 - Synchronizing using remote queries
 - Comparison with using the document service
 - Sending commands to the server

Lesson 4: Offline mode and synchronization

- Document Orientation
 - DocId to Guid
- Debugging a server-client data exchange
- Passing to Offline mode
 - Online application infrastructure
 - Offline application infrastructure
- Data Synchronization
 - Document synchronization service
 - Implementing Client synchronization
 - Implementing Server synchronization
 - Synchronizing using remote queries
 - Comparison with using the document service
 - Sending commands to the server
- Document synchronization service
 - Architecture
 - Importance of the ZZ_SYNC table
 - Data synchronization cycle
 - Remote queries and re-synchronization
 - Synchronization conflicts
 - SyncService methods: ReSync Document, ReSync Collection

Lesson 5: Server-side application

- Server-side application
 - Using components for managing documents

Lesson 6: Native shell and controls

- Using the native shell
 - Caravel app
 - Application behavior in the native shell
- Controlling the device
 - Camera
 - Active network
 - Battery status
 - Recording audio

For more information, please contact the Training Team – training@instantdeveloper.com.