

**Qlik Sense: Building Data Models**

**Course Number:** QLIK-102
**Duration:** 3 days

**Overview**

This Building Data Models with Qlik Sense training class teaches attendees how to load data from common sources such as spreadsheets, relational databases, CSV files, and other forms of structured data. After the data is loaded, participants learn advanced data modeling techniques applying business conditions to ensure the proper development of calculations.

**Prerequisites**

Students must have familiarity with tables and relationships using primary and foreign keys.  Basic knowledge of SQL query writing (or higher) is preferred.

**Materials**

All Qlik training students receive documentation for the detailed exercises they complete in the class and sample solutions.

**Software Needed on Each Student PC**

A modern browser (i.e., Chrome, Edge, Firefox) to access the environment.  Having a dual monitor is recommended but not required.

**Objectives**

* Introduce new users to Qlik
* Connect to various data sources such as OLE DB and other file types of data
* Develop a Data Model with multiple tables of data
* Handle various scenarios when dealing with Synthetic Keys
* Streamline the Data Model to create a efficiencies

**Outline**

* Data Modeling Introduction
	+ Describe the components of a Qlik Sense app
	+ State the Qlik Sense deployment options and their components
	+ Describe a relational database management system
	+ Explain different data modeling structures
	+ Understand the Qlik Sense platform
	+ Explain how to create a new app
	+ Navigate the Data load editor
* Loading in Data
	+ Explain the different connection types in Qlik Sense
	+ Create a load and selection statement
	+ Apply comments
	+ Compare data structures
	+ Use the Data model viewer
	+ Load data from Excel spreadsheets and text files
	+ Create data connections to folders of file locations
	+ Use the Select Data tool to generate the script
* Resolving Potential Data Modeling Issues
	+ Describe what synthetic keys and synthetic tables are
	+ Solve synthetic keys
	+ Explain key fields
	+ Explain Count and Sum
	+ Describe circular references
	+ Explain loosely coupled tables
	+ Leverage Qualify and Unqualify
	+ Use transformation functions in the script
* How to Generate Data
	+ Create new fields in a table
	+ Explain the Where clause
	+ Use Resident Load
	+ Explain composite keys
	+ Explain how Qlik Sense uses dates and times
	+ Discuss how to use AutoGenerate
	+ Create a master calendar
* Managing and Combining Tables
	+ Explain the mapping tables concept
	+ Identify when to use mapping tables
	+ Identify areas to clean up in the data model
	+ Use preceding loads within the script
	+ Joining tables
	+ Explain concatenation
	+ Describe the concatenation types
* Advanced Data Modeling Challenges
	+ Describe why and how to aggregate data in the script
	+ Identify Crosstable data
	+ Explain how to create scripts to load Crosstable data
	+ Explain the use of Link tables
	+ Explain data specification
	+ Describe how to implement a data classification approach in Qlik Sense
* Debugging and Developing in Qlik
	+ Explain how to use script variables
	+ Describe the use of Let and Set statements
	+ Explain the use of dollar-sign expansion
	+ Load data using external scripts with Include
	+ Control the flow of script execution
	+ Explain how to debug a data load
* Finish Line
	+ Define and use set analysis and its components
	+ Draw upon basic and advanced expression calculations
	+ Add Master items
	+ Create data islands and review their usage
	+ Leverage QVD files
	+ Discuss performance tuning
	+ Explore the impacts of appropriate document design
	+ Review best practices
* Conclusion