

Odoo Development

OVERVIEW

This course is designed to make developers able to understand the core concept of the Odoo development process. The purpose of this course is to master the technical part of odoo.

The targeted audience of this course covers developers new to the Odoo environment, Coding Enthusiast want to learn about technology or for any professionals eager to learn more about the technical aspects of Odoo.

The training covers the following technical aspects of Odoo and enables you to:

- Define data models using the ORM framework
- Define menus, list and form views
- Extend existing data models and views
- Define computed fields, default values, constraints
- Define advanced views (calendar, graph, pivot, etc.)
- Define data and actions for models(objects)
- Define custom reports
- Set up security rules (groups, access control list, and record rules)
- Support for internationalization (multiple languages)

AT THE END OF THE COURSE, YOU WILL BE ABLE TO

- Install Odoo
- Using existing modules
- Install modules
- Administrate OpenERP
- Adapt existing modules
- Objects, Views, Workflows, Wizards, Inheritance, Reports

Day 1

Introduction to Odoo and ORM Framework

- Odoo Installation
- Odoo Introduction & Setup
- Architecture
- MVC Architectural Pattern
- Module Structure

Module Basics

- Manifest of Module
- Structure of Manifest and how to maintain
- Models
- Fields
- Recordsets
- ORM Basics
- Datafiles
- View Structure

Views

- Views
- View Structure
- View Fields and Attributes
- List, Form, Search Views

Day 2

Action, Menu and Security

- Actions and Menu Items
- Groups

- Module Security
- Access Rights
- Record Rules

Advanced ORM

- Advanced ORM
- Common Methods
- Method Decorators
- Sequences
- Exceptions

Day 3

Advanced Fields

- Relational Fields
- Recordsets
- Computed Fields
- Dependencies and Inverse Computation
- Relation Between Models
- Many2one, One2Many, Many2many Fields
- Related Fields

Advanced Views

- Advanced Views
 - ✓ Kanban
 - ✓ Graph
 - ✓ Gantt
 - ✓ Pivot
 - ✓ Calendar
 - ✓ Map etc.

Day 4

Inheritance

- Model Inheritance
- Wizards
- View Inheritance
- Transient Model

Buttons, Widgets and Decorations and Chatter

- Buttons
- Widgets
- Decorations
- Chatter

Odoo Filtered vs. mapped Function

- Filtered Function
- Mapped function

Day 5

Reports, QWeb

- QWeb Templating Language
- QWeb Reports

Translation and External API

- XML-RPC External API
- Report Translation

Language Translation

Questions & Answers

OUTCOME OF THE TRAINING (IN DEPTH)

Odoo Architecture

- Three Tier Architecture
 - ✓ Multitenancy
- Database, Application, Presentation
- Model View Controller (MVC)
- PostgreSQL, Odoo Server, Web Browser Client

Odoo Module Structure

- Defining Odoo Modules
 - ✓ Manifest and Import files
- Module Composition Directories

Odoo Models

- Model
 - ✓ Business objects as Python classes extending Model
- Model Attributes

Basic Fields

- Model Fields
- Field Attributes
- General Field Types
 - ✓ Boolean
 - ✓ Char
 - ✓ Float, etc.

Advanced Field Types

- Advanced Field Types
 - ✓ Binary
 - ✓ Monetary
- Date/Datetime, etc.

Object Relational Mapping (ORM) Basics

- ORM for Security and Extensibility

- Recordsets
 - ✓ Interactions with models and records
- Environment
- Datafiles
 - ✓ Core operations and Structure

Security

- Access control Mechanisms
 - ✓ Access Rights and Record Rules
- Groups
- Field Access

Actions and Menus

- Triggering Actions
- Window Actions
- Server Actions
- Client Actions, etc.
- Menu Items

Views

- View Definition and Attributes
- List View
- Form View
- Search View

Advanced ORM

- Method Decorators
- Common ORM Methods
- Create/Update, Search/Read, Unlink, Recordset
- Operations
- Odoo Exceptions

Advanced Fields

- Relational Fields
 - ✓ Many2one
 - ✓ One2many,

✓ Many2many Fields

- Computed Fields
- Related Fields

Advanced Views

- Different Advanced View Types
 - ✓ Kanban
 - ✓ Calendar
 - ✓ Pivot
 - ✓ Cohort
 - ✓ Gantt
 - ✓ Graph
 - ✓ Activity
 - ✓ Dashboard
 - ✓ Diagram
 - ✓ Map

Inheritance

- Model Inheritance
 - ✓ Classical Inheritance
 - ✓ Extension Inheritance,
 - ✓ Delegation Inheritance
- View Inheritance

Wizards

- Transient Models
- Uses for Wizards and their Properties
- Launching Wizards

Buttons, Widgets and Decorations and Chatter

- Buttons
 - ✓ Types of Button
 - ✓ Defining button
 - ✓ Adding functionality
- Widgets

- ✓ User Avatar Widget
- ✓ Widget Data Badges and Decorations
- ✓ List Activity
- ✓ Many2Many Checkboxes
- ✓ CopyClipboard Widget
- Decorations
 - ✓ Using Text Decorations in Views
- Chatter
 - ✓ Send Message
 - ✓ Log Note
 - ✓ Schedule an Activity
 - Email
 - Call Meeting
 - To Do
 - Upload Document

Odoo Filtered vs. mapped Function

- Filtered Function
- Mapped function

QWeb and Reports

- QWeb Templating Engine
- QWeb Template Directives
 - ✓ Conditionals, Loops, Attributes, etc.
- Custom Reports

External API

- XML-RPC External API
- Configuration and Connection to Database
- Calling Odoo Methods

Translation

- Module Translation
- Explicit/Implicit Export Translation
- Report Translation