

# **Odoo Development**

## **Duration: 40 Hours (5 Days)**

### **Course Overview**

The Odoo Development course is designed to equip learners with the necessary skills to manage and customize Odoo, a comprehensive suite of business applications. With Odoo certification, individuals can validate their expertise in this powerful open-source ERP system. Module 1: Install Odoo sets the foundation for the course, teaching students how to successfully Install and configure Odoo on their systems. Module 2: Using existing modules guides learners through the Utilization of pre-built Odoo modules to support various business functions. Module 3: Install modules delves into the process of Adding new modules to extend the functionality of Odoo. Module 4: Administrate OpenERP covers the administrative aspects of Odoo, ensuring learners can maintain and optimize the system. Module 5: Adapt existing modules teaches how to Customize and tweak modules for specific business needs. Module 6: Objects, Views, Workflows, Wizards, Inheritance, Reports dives deep into the technical aspects of Odoo, such as Creating custom objects and views, managing workflows, and Generating reports. By the end of this Odoo developer course, participants will have a comprehensive understanding of how to develop and maintain Odoo for their business or to offer services to others.

### **Audience Profile**

The Odoo Development course by Koenig Solutions is designed for IT professionals seeking to master the Odoo ERP platform for developing and managing business applications.

- ERP Developers
- Software Developers interested in ERP systems
- IT Professionals working with business management software
- Technical Consultants specializing in enterprise solutions
- Systems Architects designing ERP solutions
- Business Analysts aiming to understand the technical aspects of Odoo
- Project Managers overseeing Odoo implementation projects
- Product Owners managing Odoo-based products
- Entrepreneurs seeking to customize Odoo for their business needs

### **Course Syllabus**

#### **Odoo Development Course by Koenig Solutions**

- Install Odoo.
- Use existing modules.
- Install new modules.
- Administer OpenERP.
- Adapt existing modules.
- Work with Objects, Views, Workflows, Wizards, Inheritance, and Reports.

#### **Day 1:**

##### **Introduction to Odoo and ORM Framework**

- Odoo Installation

- Odoo Introduction and Setup
- Architecture Overview
- MVC Architectural Pattern
- Module Structure

## Module Basics

- Manifest of a Module
- Structure of the Manifest and Maintenance
- Models and Fields
- Recordsets
- ORM Basics
- Datafiles
- View Structure

## Views

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

## Day 2:

### Actions, Menus, and Security

- Actions and Menu Items
- User Groups
- Module Security
- Access Rights Management
- Record Rules

### Advanced ORM

- Advanced ORM Concepts
- Common Methods and Decorators
- Sequences and Exceptions

## Day 3:

### Advanced Fields

- Relational Fields
- Recordsets
- Computed Fields
- Dependencies and Inverse Computation
- Model Relationships (Many2one, One2Many, Many2many)
- Related Fields

### Advanced Views

- Kanban
- Graph
- Gantt

- Pivot
- Calendar
- Map

## **Day 4:**

### **Inheritance and Customization**

#### **Inheritance**

- Model Inheritance
- Wizards and Transient Models
- View Inheritance

#### **Buttons, Widgets, Decorations, and Chatter**

- Button Types and Functionalities
- Widgets (e.g., Avatar, Data Badges, Copy Clipboard)
- Text Decorations in Views
- Chatter Features
- Sending Messages
- Logging Notes
- Scheduling Activities (Email, Call, Meeting, To-Do)

#### **Filtered vs. Mapped Functions**

- Using the Filtered Function
- Using the Mapped Function

## **Day 5:**

### **Reports, Translation, and External API**

#### **Reports and QWeb**

- QWeb Templating Language
- Custom Reports with QWeb

#### **Translation**

- Module Translation Techniques
- Report and Language Translation

#### **External API**

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

### **Outcomes of the Training (In Depth)**

#### **Odoo Architecture**

- Three-Tier Architecture
- Multitenancy Support

- Database, Application, and Presentation Layers
- MVC Pattern (PostgreSQL, Odoo Server, Web Browser Client)

## **Odoo Module Structure**

- Defining Modules with Manifest and Import Files
- Composition of Module Directories

## **Odoo Models**

- Business Objects as Python Classes
- Model Attributes

## **Basic Fields**

- Field Types (Boolean, Char, Float, etc.)

## **Advanced Field Types**

- Binary and Monetary Fields
- Date/Datetime Fields

## **Object Relational Mapping (ORM)**

- ORM for Security and Extensibility
- Recordsets for Interacting with Models
- Datafiles and Core Operations

## **Security**

- Access Control Mechanisms (Access Rights, Record Rules, Groups)

## **Actions and Menus**

- Window, Server, and Client Actions
- Menu Items

## **Views**

- Definition and Attributes for List, Form, and Search Views

## **Advanced ORM**

- Method Decorators and Common ORM Methods
- Recordset Operations (Create/Update, Search/Read, Unlink)
- Handling Exceptions

## **Advanced Fields**

- Relational Fields (Many2one, One2Many, Many2many)
- Computed and Related Fields

## **Advanced Views**

- Specialized Views (Kanban, Calendar, Pivot, Gantt, Graph, Dashboard, Diagram, Map, etc.)

## **Inheritance**

- Classical, Extension, and Delegation Inheritance for Models

- View Inheritance

## **Wizards**

- Transient Models and Their Properties
- Creating and Launching Wizards

## **Buttons, Widgets, Decorations, and Chatter**

- Buttons (Types, Definitions, Adding Functionalities)
- Widgets for Enhanced User Interaction
- Chatter Features for Communication and Task Management

## **QWeb and Reports**

- QWeb Templating Engine
- Directives for Custom Reports (Conditionals, Loops, Attributes)

## **External API**

- XML-RPC External API
- Configuration and Method Calls

## **Translation**

- Explicit and Implicit Translation Techniques
- Report and Language Translation