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# Microsoft Dynamics 365 training for developers

4 days (28 hours)

## Presentation

Our [Microsoft Dynamics 365](#) training courses are dedicated to Microsoft technology professionals wishing to gain expertise on the latest On-Premise & Online CRM versions. This training is aimed at developers wishing to understand the challenges and concepts of advanced development on Microsoft Dynamics 365: from the configuration and implementation of business processes, their implementations as well as their Workflows.

As in all our training courses, we'll be using the latest versions of the tools available: Visual Studio 2022 as the development IDE and the latest SDK for Dynamics 365 ([8.2.1.1](#) at the time of writing).

## Objectives

- Understand the advanced concepts of Microsoft Dynamics 365 CRM: Online & On Premise
- Develop new rich components & plugins for Microsoft Dynamics 365 CRM
- Customizing MS Dynamics 365 CRM
- Advanced use of the MS-Dynamics 365 CRM SDK

## Target audience

Developers

## Prerequisites

- Dynamics 365 CRM functional with one user installed and configured per person

- 1 trainer admin account
- Knowledge of .NET / C#

Microsoft Dynamics 365 CRM training program: Development

## Introduction to Dynamics CRM customization and configuration

- CRM Architecture
- Customization methodology

## Overview of Dynamics 365 extension options

- Introduction & CRM scalability overview
- xRM Application Framework
- Platform and scalability features
- Security Model
- Business Model
- Business Logic
- Business Entity Components
- Data Access : Data Access Components & Platform

## Common Platform Operations

- WCF Web Services
- Discovery Service
- Early versus Late-Binding
- Early-Bound Entity Class
- Late-Bound Entity Class
- Organization Service
- Authentication & Authorization
- Entity Information
- Data types
- use of methods :
  - Create Method
  - Retrieve Method
  - Update Method
  - Delete Method
  - RetrieveMultipleMethod
- Fault and error management: Handling WCF Faults

## Query data and execute operations

- Querying Data and Executing Operations
- Querying in Microsoft Dynamics CRM
- Query Expression
- QueryByAttitude
- LINQ Queries
- FetchXML

- Filtered Views
- OData
- Execute Method
- Requests & Responses
- Using MetadataService Web Service

## Create your own Workflow: Business Processes

- Workflows overview
- Overview of Dialogues
- Configuration : Custom Workflow Activity Assemblies
- Demonstration: Configuring a Custom Workflow Activity
- Creation: Custom Workflow Activities
- Debugging: Custom Workflow Activities
- Creation & modification via Windows Workflow Foundation (XAML Workflows)
- Demonstration: Modifying an existing workflow in Visual Studio 2017

## Plug-ins

- Overview and use of plug-ins
- Registration Tool
- Event Framework
- Plug-in Isolation, Trusts & Statistics
- Developing plug-ins
- Impersonation in plug-ins
- Entity Classes & Plug-ins
- Register & Deploy Plug-ins
- Debugging Plug-ins
- Windows Azure Integration with Microsoft Dynamics CRM

## Application Event Programming

- Using JavaScript Libraries
- Form & Field Events
- Xrm.Page
- Xrm.Page.context (Client-Side Context)
- Xrm.Pge.data entity
- Xrm.Page.ui
- Form Types
- Form Event Handler Execution Context
- Setting Event Dependencies
- Pass Parameters
- Best Practices: Writing Client-Side Code
- Debugging Client-Side Code

## Customer Extensions

- Customizing: Site Map
- Customization: Ribbon

- URL Addressable Forms & Views

## Web Resources

- Introduction to Web Resources
- Web Resource Management
- Referencing Web Resources
- Silverlight Web Resource
- REST Endpoint, OData and JSON
- Using JQuery

## Case studies & Practical exercises

- Creating Leads
- Account Management Application
- Using QueryExpression
- Using LINQ to Perform, Create, Read, Update and Delete Operations
- Using FetchXML
- Using Request and Response
- Creating a Custom Workflow Activity
- Creating a Plug-in
- Format: Telephone Number Formatting
- Control Tab Visibility
- Site Map modification
- Ribbon customization

## Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.