



Course 822700 • Microsoft Dynamics 365

Development and Extending

(Using Visual Designers and Visual Studio with the C# language)

Length

- 3 days

Prerequisites

- Experience with basic customizations and workflows for CRM
- Familiarity with Microsoft Dynamics 365 and/or CRM 2016/2015/2013/2011
- A working knowledge of programming, Visual Studio, and familiarity of C# provides the best technical background for this course.

Audience

- Dynamics 365 CRM developers
- Partners/customers who have a technical background and familiarity with Microsoft Dynamics

What You'll Learn

- Building your own Apps with the Dynamics 365 App Designer
- Customizing Sitemap Navigation
- Customizing the Command Bar Ribbon
- D365 New Client API object model
- Using the D365 Discovery and IOrganization Service
- Querying Data and Executing Operations
- Custom Workflow Activities
- Creating plug-ins or working with pre-built Plugin sample code examples

This course provides you with the information how you can develop and extend Dynamics 365. This course focuses on extension methods documented in the Microsoft Dynamics 365 CRM. Developing a concise understanding of business process implementation and workflows. In addition, the course describes how to use Plug-ins. You can develop extensions for Dynamics 365 to support custom functionality beyond sales and service. The platform is a full application environment with database, application server and client interface. This class lets you develop (extend) the product to “fit” your specific needs.

Workshop Outline

Module 1: Building your own Apps with the Dynamics 365 App Designer

The current trend is for more Visual Designers, Visual Tools and less programming. This module shows you how to use the new Visual Tools in D365.

- The new modular Business Applications in Dynamics 365
- Using App Designer to Create Apps
- Learn how to build modular business applications with App Modules
- Understand how to configure App Modules

Module 2: Customization Sitemap Navigation

How you can make the top-level navigation only show the areas your organizations will use or adding new sections to your D365

- Editing the Sitemap
- Choosing the best Sitemap for your organization

- Example of Sitemaps for Sales, Service and Government
- New Sitemap Visual Editor
- XRMToolBox and XRMTTools

Module 3: Customizing the Command Bar Ribbon

Often you want to make a new command available or hide “delete” from specific users.

- Adding new Buttons and custom command
- Controlling Commands with Security Roles
- Controlling Commands by editing the Ribbon
- Linking to Internet Information sources

Module 4: Dynamics 365 New Client API object model

The Object Model for D365 has changed. If you have D365 Plan 1, CRM 2016, CRM 2015, CRM 2013 or CRM 2011. You need to know what has changed and what you need to update on your existing D365 (CRM).

- Objects and methods for custom business functionality
- Support for JavaScript
- Get or set attribute values
- Show and hide user interface elements
- Reference multiple controls per attribute
- Access multiple forms per entity
- Manipulate form navigation items
- Interact with the business process flow control

Module 5: Using the D365 Discovery and IOrganization Service

The two main services help you connect to the “right” Organization and then control the privileges to ensure security and object access.

- The Discovery service and the specific D365 Organization
- Endpoint address URL to access business data
- Discovery service access methods:
 - The Web API
 - Organization Service API
- IOrganization Service API
 - The primary web service to work with data and metadata
 - Adding IOrganization references to your Visual Studio project

Module 6: Querying Data and Executing Operations

How to use the methods to query Microsoft D365 to create, update and Delete.

- Query Expression
- QueryByAttitude
- LINQ Queries
- FetchXML
- Filtered Views

- OData
- Execute Method
- Requests and Responses
- Using the Metadata Service Web Service

Module 7: Custom Processes (Workflow) Activities

The terms keep changing, but in essence the “workflows” automation a task. The particular term: process, dialogue, workflow and advanced workflow specify the usage, method of creation and execution.

- Overview of Processes, Workflows and Advanced Workflows
- Overview of Dialogues
- Setting up Custom Workflow Activity Assemblies
- Configuring a Custom Workflow Activity
- Creating Custom Workflow Activities
- Debugging Custom Workflow Activities
- Creating and Modifying Windows Workflow Foundation (XAML Workflows)
- Modifying an Existing Workflow in Visual Studio

Module 8: Creating Plug-ins and working with pre-built Plugins

Plug-ins are programs developed in a .Net language (we use C#). Plug-ins extend the functionality of events. Learn how plug-ins are used, how to develop Plug-ins, how to register, deploy and debug Plug-ins.

- Overview of Plug-ins
- .NET assemblies
- On-Premises and Online
- Event Framework
- Plug-in Isolation, Trusts and Statistics
- Developing Plug-ins
- Impersonation in Plug-ins
- Entity Classes and Plug-ins
- Register and Deploy Plug-ins
- Debugging Plug-ins
- Windows Azure Integration with Microsoft Dynamics 365
- Working with pre-built Plugins

Module 9: Course Review

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