

Using AL in Microsoft Dynamics 365 Business Central

Course Duration: 40 Hours (5 Days)

Overview

The "Using AL in Microsoft Dynamics 365 Business Central" course is designed to provide learners with an in-depth understanding of the AL (Application Language) programming environment used in Microsoft Dynamics 365 Business Central for customizing and extending the functionality of the ERP system. Through a series of modules, participants will explore the modern development environment with Visual Studio Code, learn how to create and manage Extensions, understand object-oriented constructs like Tables, Pages, and page Extensions, and gain skills in Debugging techniques. Learners will also delve into reporting, Queries, and XML Ports to manage data presentation and exports, as well as integrate Business Central with Power BI for enhanced business intelligence capabilities. By mastering these skills, participants will be able to create tailored solutions that fit specific business needs, ensuring efficient use of the Business Central platform. This course is crucial for developers and IT professionals who aim to leverage Business Central's full potential through customization and extension.

Audience Profile

This course offers comprehensive training on integrating AI capabilities within Microsoft Dynamics 365 Business Central for modern development needs.

- ERP Developers: Specializing in Dynamics 365.
- Software Engineers: Transitioning to Dynamics 365 Business Central.
- Dynamics NAV Developers: Seeking to upgrade their skills to Business Central.
- IT Professionals: Exploring AI applications in business solutions.
- Microsoft Dynamics 365 Consultants: Including Technical Support Engineers.
- Business Analysts: Interested in AI integration within ERP systems.
- Solution Architects: Focused on designing AI-enhanced systems on Business Central.
- Project Managers: Overseeing Dynamics 365 Business Central implementations.
- Systems Administrators: Managing Dynamics 365 environments.
- Power Users: Exploring advanced customization in Dynamics 365 Business Central.

Course Syllabus

Module 1: Modern Development Environment

- Overview of Visual Studio Code
- Introduction to Visual Studio Code
- Installing AL support in Visual Studio Code
- Logical database and its objects
- Extensions in Business Central
- Creating a new extension
- JSON configuration files

- Building and deploying an extension
- Using code snippets
- Properties and triggers
- Object properties and triggers
- Lab: Creating and running an AL Extension

Module 2: Tables

- Definition of a Table
- Table properties
- Field properties
- Table relations
- Regular table relations
- Filtered and conditional table relations
- Keys in tables
- Field groups: DropDown and Brick
- Calculated fields
- Creating a table
- Using code snippets
- Setting properties, keys, and table relations
- Lab: Create a Table

Module 3: Table Extensions

- Definition of a Table Extension
- Table extension properties
- Creating a table extension
- Using code snippets
- Lab: Create a Table Extension

Module 4: Pages

- Definition of a Page
- Page types and descriptions
- Page properties
- Definition of controls
- Control areas
- Control types and subtypes
- Group, Repeater, Cue Group, and Fixed Layout
- Linking pages and page parts
- Creating pages
- Control properties
- Definition of actions
- Page actions and Role Center actions
- Action properties

- Lab: Create a Card Page
- Lab: Create a List Page

Module 5: Page Extensions

- Definition of a Page Extension
- Page extension properties
- Creating a page extension
- Using code snippets
- Lab: Create a Page Extension

Module 6: Entitlements and Permission Sets

- Introduction to entitlements and permissions
- Creating entitlements and permission sets
- Overriding entitlements with inherent permissions

Module 7: Basics of AL Programming

- AL programming language overview
- Assignments and functions
- Expressions (Operators)
- Options in AL
- Enums and Enum Extensions
- Working with collections
- Frequently used AL procedures
- Conditional statements
- Repetitive statements
- Lab: Basics of AL Operators

Module 8: Built-in Functions in Business Central

- String functions
- Numeric functions
- Rounding functions
- ABS and Power functions
- Array functions
- List functions
- System functions

Module 9: Debugging in Business Central

- Debugging techniques with dialog functions
- Using MESSAGE and CONFIRM for debugging
- Debugging with DIALOG
- Debugging with text output
- Debugging with ERROR

- Using the Business Central debugger
- Activating the debugger
- Debugger windows overview
- Lab: Debugging in Visual Studio Code

Module 10: Files

- Working with the File object
- Working with the TempBlob object
- Streaming techniques
- File management: reading and writing
- File management: working with streams and the TempBlob table
- Lab: Reading and Writing Files

Module 11: XMLPorts

- Definition of XMLPorts
- XMLPort properties and triggers
- Designing XMLPorts
- Creating XMLPorts
- Working with plain text
- Using XMLPorts in AL code
- Lab: Create an XMLPort to Export XML Data
- Lab: Create an XMLPort to Export Variable Text

Module 12: Queries

- Query design
- Aggregating and ordering data using date methods
- Creating a query example
- Accessing queries from AL
- Advanced query concepts
- Lab: Using a Query for a Chart
- Lab: Using Queries in AL

Module 13: Reporting

- Report components overview
- Report design process
- Designing the data model
- Data item properties in reports
- Creating an RDL layout report
- Grouping and totaling overview
- Report triggers and functions
- Report trigger flow
- Overview of processing-only reports

- Overview of Word report layouts
- Lab: Creating a Basic Report
- Lab: Creating a Processing-Only Report

Module 14: Power BI

- Enabling business data for Power BI
- Using Microsoft Dynamics 365 Business Central as a Power BI data source
- Lab: Use Microsoft Dynamics 365 Business Central as a Power BI Data Source