

KOENIG SOLUTIONS • COURSE OUTLINE

Using AL in Microsoft Dynamics 365 Business Central (Core Development)

Learn to develop AL extensions in Microsoft Dynamics 365 Business Central, from tables and pages to debugging, reporting and Power BI integration.

5 Days

40 HOURS

14

MODULES

99

TOPICS

16

HANDS-ON LABS

COURSE 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.

Who Should Attend

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

LEARNING OBJECTIVES

- Configure the AL development environment in Visual Studio Code
- Build tables, table extensions, pages and page extensions
- Set up entitlements and permission sets
- Apply AL programming constructs such as loops and enums
- Use built-in string, numeric and array functions
- Debug AL code using dialog functions and the debugger
- Design XMLPorts, queries and reports for data exchange
- Connect Business Central to Power BI as a data source

14 Modules, 99 Topics

01

Lab

Modern Development Environment

TOPICS

- 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

02

Lab

Tables

TOPICS

- 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

03

Lab

Table Extensions

TOPICS

Definition of a Table Extension · Table extension properties · Creating a table extension · Using code snippets

04**2 Labs**

Pages

TOPICS

- 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

05**Lab**

Page Extensions

TOPICS

Definition of a Page Extension · Page extension properties · Creating a page extension · Using code snippets

06

Entitlements and Permission Sets

TOPICS

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

07**Lab**

Basics of AL Programming

TOPICS

- 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

08

Built-in Functions in Business Central

TOPICS

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

09**Lab**

Debugging in Business Central

TOPICS

- 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

10**Lab**

Files

TOPICS

- 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

11**2 Labs**

XMLPorts

TOPICS

Definition of XMLPorts · XMLPort properties and triggers · Designing XMLPorts · Creating XMLPorts · Working with plain text · Using XMLPorts in AL code

12

2 Labs

Queries

TOPICS

- Query design
- Aggregating and ordering data using date methods
- Creating a query example
- Accessing queries from AL
- Advanced query concepts

13

2 Labs

Reporting

TOPICS

- 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

14

Lab

Power BI

TOPICS

- Enabling business data for Power BI
- Using Microsoft Dynamics 365 Business Central as a Power BI data source

HANDS-ON LABS

Practise What You Learn

#	MODULE	ACTIVITY
01	Modern Development Environment	Creating and running an AL Extension
02	Tables	Create a Table
03	Table Extensions	Create a Table Extension
04	Pages	■ Create a Card Page ■ Create a List Page

#	MODULE	ACTIVITY
05	Page Extensions	Create a Page Extension
07	Basics of AL Programming	Basics of AL Operators
09	Debugging in Business Central	Debugging in Visual Studio Code
10	Files	Reading and Writing Files
11	XMLPorts	- Create an XMLPort to Export XML Data - Create an XMLPort to Export Variable Text
12	Queries	- Using a Query for a Chart - Using Queries in AL
13	Reporting	- Creating a Basic Report - Creating a Processing-Only Report
14	Power BI	Use Microsoft Dynamics 365 Business Central as a Power BI Data Source

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Hands-on exercises throughout the course
- Delivery by certified instructors and subject matter experts
- Course completion certificate from Koenig

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com

✉ info@koenig-solutions.com