KOENIG SOLUTIONS · COURSE OUTLINE

Development II in Microsoft Dynamics AX 2012

Learn to develop and customise Microsoft Dynamics AX 2012 solutions using X++, object-oriented programming, database access and security techniques.

5 Days	6	30
40 HOURS	MODULES	TOPICS

COURSE OVERVIEW

The Development II in Microsoft Dynamics AX 2012 course is an advanced training program designed to deepen learners' understanding of the X++ programming language and its application in customizing and developing robust functionalities within the Dynamics AX environment. The course covers a range of topics from X++ programming essentials, object-oriented programming, and effective use of development tools to complex concepts such as database access, exception handling, and implementing security measures for developers. Learners will gain hands-on experience with object and data models, learn to write control statements, work with classes, and access and manipulate data in the AX database. The course also emphasizes the importance of exception handling mechanisms and the implementation of a robust security framework to protect applications and data. With its comprehensive approach, learners will be equipped with best practices and the skills necessary to enhance the Dynamics AX system, ensuring high-quality and secure customizations.

WHO THIS COURSE IS FOR

The Development II in Microsoft Dynamics AX 2012 course is designed for IT professionals who want to master X++ programming and object-oriented development within the Dynamics AX environment.

- **Microsoft Dynamics AX Developers**
- **X++ Programmers**
- **ERP Software Engineers**
- **Technical Consultants specializing in Dynamics AX**
- **System Developers looking to customize Dynamics AX**
- **Solution Architects focusing on Microsoft Dynamics AX solutions**
- **IT Professionals seeking to enhance their enterprise application development skills**
- **Technical Support Engineers for Dynamics AX systems**
- **Professional Developers transitioning to Dynamics AX development**
- **Existing Dynamics AX team members aiming to deepen their technical expertise**

LEARNING OBJECTIVES

What You Will Learn

- Identify key features and best practices of X++ development
- Apply object and data models using the Reverse Engineering tool
- Use control statements, operators and built-in functions in X++
- Work with classes, inheritance and access control modifiers
- Compare tables and classes and apply the event publisher-subscriber model
- Retrieve and manipulate data using SELECT statements and CRUD operations
- Implement Try, Catch and Retry exception handling statements
- Design security policies and secure APIs with the CAS framework

COURSE SYLLABUS

6 Modules, 30 Topics

01

Introduction To X++

TOPICS

- Identify key features of X++ development
- Understand the fundamentals of object-oriented programming
- Utilize the development tools available in Microsoft Dynamics® AX
- Create object and data models from existing application elements using the Reverse Engineering tool
- Follow best practices to develop efficient and maintainable code

02

X++ Control Statements

TOPICS

- Declare and use extended data types for variables
- Utilize various operators available in X++
- Control program flow using conditional statements
- Execute repetitive tasks using loop statements
- Use built-in functions to enhance code functionality
- Display data and messages to users using output commands

03

Objects And Classes

TOPICS

- Work with classes in Microsoft Dynamics® AX 2012 X++ development
- Control access to methods using Access Control Method Modifiers
- Implement inheritance to extend class functionality
- Understand the differences between objects and classes
- Properly initialize variables following scoping rules
- Call methods within the same class
- Use different method types available in X++
- Compare tables and classes, understanding their similarities and differences
- Implement the event publisher-subscriber model when modifying application code

04

Accessing the Database

TOPICS

- Retrieve data from the database using SELECT statements
- Perform CRUD operations (Create, Read, Update, Delete) on database records
- Utilize and build queries using kernel classes

05

Exception Handling

TOPICS

- Understand the exception handling mechanism in Microsoft Dynamics® AX
- Implement Try, Catch, and Retry statements
- Throw exceptions from code to handle errors effectively

06

Security for Developers

TOPICS

- Assign permissions to application elements
- Design and implement security policies
- Secure unsafe APIs using the Code Access Security (CAS) framework
- Authenticate data returned from display methods

WHAT IS INCLUDED

Everything You Need to Succeed

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

ABOUT 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.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

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