

Development II in Microsoft Dynamics AX 2012

Course Duration: 40 Hours (5 Days)

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.

Audience Profile

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

Course Syllabus

Chapter 1: Introduction To X++

- 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.

Chapter 2: X++ Control Statements

- 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.

Chapter 3: Objects And Classes

- 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.

Chapter 4: Accessing the Database

- 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.

Chapter 5: Exception Handling

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

Chapter 6: Security for Developers

- 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.