



Course Syllabus

Course 80013: Microsoft Dynamics® AX 2009 Development III

Key Data

Course #: 80013

Number of Days: 3

Format: Instructor-Led

Certification Exams:

This course helps you prepare for the following Microsoft Certified Professional exams:

- MB6-821 - MorphX Development Solution Exam AX 2009
- Development for AX 2009

Certification Track:

This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.

Course content, prices, and availability are subject to change without notice.

This three day course introduces the student to advanced development in Microsoft Dynamics AX 2009 using X++ and development tools. This course begins with learning the development environment and tools including application architecture, code security, creating help files and transferring modifications between applications. The student will then learn more about Fetch of data from the database, Classes, Forms and Reports. The exercises included in this course will focus on typical additions to and modifications of the standard application. This course is meant to be a more advanced course covering practical development in Microsoft Dynamics AX.

Audience

This course is intended for individuals who will be developing within Microsoft Dynamics AX using X++. This audience typically includes technical consultants who will be working with Microsoft Dynamics AX to develop customizations and modifications to meet clients' needs. This course will be most beneficial for someone who is familiar with the concepts of object oriented programming, SQL and basic programming in X++. Additionally, consultants who are responsible for training or supporting the customer will benefit from this course.

At Course Completion

After completing this course, students will be able to:

- View where application elements are being used within the system.
- Implement secure X++ code
- Create and modify help files and associate them with application element nodes.
- Transfer modifications from the development environment to test or live environment
- Program optimal database access using a while select statement
- Program optimal database access using queries.
- Describe the caching mechanisms in Microsoft Dynamics® AX 2009.
- Prevent and resolve database locking
- Use temporary tables in classes, forms, and reports.
- List the reasons for using InitFrom<tablename> methods.
- Use ParmId and ParmTables.
- Employ the various techniques available for integrating external data with Microsoft Dynamics AX 2009.
- Use collection classes to store data in X++.
- List which application objects control different Graphical User Interface (GUI) components.
- Modify and use the Application Substituted Kernel Classes.
- Extend the RunBase framework to create new batch processes.
- Transfer information using the Args object.
- Identify the three main sections that make up a form.
- Add data sources to a form to define what data is displayed by the form
- Add controls to a form to display data.
- Modify form methods to the control how the form behaves when it opens and closes.
- Make decisions about where to place the code
- Make runtime modification of the fetch of data
- Create lookup forms, wizards and list pages.

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- Identify the three main sections that make up a report.
- Add data sources to a report to define what data is displayed by the report.
- Create a report design with multiple sections and controls.
- Override system methods to control the fetch and display of data

Prerequisites

Before attending this course, students must have:

- Completed Microsoft Dynamics AX2009 Development I
- Completed Microsoft Dynamics AX2009 Development II

Student Materials

The student kit includes a comprehensive workbook and other necessary materials for this class.

Module 1: Development Environment and Tools

This chapter gives a comprehensive foundation for the use of the development environment and integrated tools.

Lessons
<ul style="list-style-type: none">▪ Cross Reference▪ Trustworthy Computing (TwC)▪ Help System▪ Development Environment
<ul style="list-style-type: none">▪ Lab 1.1 Check Access in a Display Method

After completing this module, students will be able to:

- View where application elements are being used within the system.
- Implement secure X++ code
- Create and modify help files and associate them with application element nodes.
- Transfer modifications from the development environment to test or live environment

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Module 2: Working with Data

This chapter focuses on fetching data from the database. The goal is to make optimal communication with the database with respect to performance. In addition, the student will have knowledge in why and how the use of temporary tables.

Lessons
<ul style="list-style-type: none"> ▪ While Select ▪ Query ▪ Caching ▪ Locking ▪ Temporary Tables ▪ InitFrom ▪ Parm Tables ▪ Data Integration
▪ Lab 2.1: Fetching Data
▪ Lab 2.2: Converting Queries
▪ Lab 2.3: Reducing locking
▪ Lab 2.4: Temporary Tables
▪ Lab 2.5: Integrating External Data

After completing this module, students will be able to:

- Program optimal database access using a while select statement
- Program optimal database access using queries.
- Describe the caching mechanisms in Microsoft Dynamics™ AX 2009.
- Prevent and resolve database locking
- Use temporary tables in classes, forms, and reports.
- List the reasons for using InitFrom<tablename> methods.
- Use ParmId and ParmTables.
- Employ the various techniques available for integrating external data with Microsoft Dynamics AX 2009.

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Module 3: Classes

This module shows how to use and modify some standard application classes and methods to utilize the existing code for new modifications

Lessons
<ul style="list-style-type: none"> ▪ Collection Classes ▪ Application Object Classes ▪ Application Substituted Kernel Classes ▪ RunBase Framework ▪ Args Object ▪
▪ Lab 3.1: Create a Map
▪ Lab 3.2: Create a Query From Code
▪ Lab 3.3: Create a Global method
▪ Lab 3.4: Run a Report From Code
▪ Lab 3.5: Make a RunBase Class
▪ Lab 3.6: Modify a RunBase Class
▪ Lab 3.7: Using Args

After completing this module, students will be able to:

- Use collection classes to store data in X++.
- List which application objects control different Graphical User Interface (GUI) components.
- Modify and use the Application Substituted Kernel Classes.
- Extend the RunBase framework to create new batch processes.
- Transfer information using the Args object.

Module 4: Forms

This chapter discusses how to create and modify advanced forms.

Lessons
<ul style="list-style-type: none"> ▪ Architecture ▪ Data Sources ▪ Form Controls ▪ Form Methods ▪ Placement of code ▪ Additional Controls ▪ Form Types
▪ Lab 4.1: Create a form
▪ Lab 4.2: Use Unbound Controls
▪ Lab 4.3: Initialize a Form
▪ Lab 4.4: Add a window control
▪ Lab 4.5: Create a List Page

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After completing this module, students will be able to:

- Identify the three main sections that make up a form.
- Add data sources to a form to define what data is displayed by the form
- Add controls to a form to display data.
- Modify form methods to control how the form behaves when it opens and closes.
- Make decisions about where to place the code
- Make runtime modification of the fetch of data
- Create lookup forms, wizards and list pages.

Module 5: Reports

This module shows how to fetch data into reports based on queries or X++ code and covers some advanced functions, for example aggregating and additional report sections.

Lessons
<ul style="list-style-type: none">▪ Architecture▪ Data Sources▪ Design▪ Methods
Lab 5.1: Add Header and Footer Sections
Lab 5.2: Override System Methods

After completing this module, students will be able to:

- Identify the three main sections that make up a report.
- Add data sources to a report to define what data is displayed by the report.
- Create a report design with multiple sections and controls.
- Override system methods to control the fetch and display of data

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