Microsoft Dynamics 365: Finance and Operations Apps Developer (MB-500T00)

COURSE OVERVIEW

The Dynamics 365 Finance and Operations apps developer is a key technical resource that implements and extends the application to meet the requirements of the business.

WHO WILL BENEFIT FROM THIS COURSE?

Microsoft Dynamics 365 Finance and Operations Apps Developers

COURSE OBJECTIVES

Students will learn to:

- Explore the ecosystem and main components of finance and operations apps
- Explore the technical architecture of finance and operations apps
- Explore design and deployment considerations for finance and operations apps
- Manage finance and operations apps implementations by using Lifecycle Services
- Work with performance and monitoring tools in finance and operations apps
- Manage source code by using version control in finance and operations apps
- Explore the test framework and tools in finance and operations apps
- Explore reporting tools in finance and operations apps
- Set up a VHD for finance and operations apps
- Start developing for finance and operations apps by using Visual Studio
- Get started with development using X++ in finance and operations apps
- Develop object-oriented code in finance and operations apps
- Implement application lifecycle management in finance and operations apps
- Build extended data types and enumerations for finance and operations apps
- Build data models in finance and operations apps
- Build forms and optimize form performance in finance and operations apps
- Create classes in finance and operations apps
- Build reports for finance and operations apps
- Build workspaces in finance and operations apps
- Implement role-based security in finance and operations apps
- Apply basic performance optimization in finance and operations apps
- Explore extensions and the extension framework in finance and operations apps
- Extend elements in finance and operations apps
- Consume business events in finance and operations apps
- Work with workflows in finance and operations apps
- Identify data integration patterns and scenarios in finance and operations apps

- Implement data integration concepts and solutions for finance and operations apps
- Implement the Data management package API for finance and operations apps
- Data integrations with finance and operations apps
- Prepare data for migration to finance and operations apps
- Manage data sources with external data stores in finance and operations apps
- Integrate finance and operations apps with Microsoft Azure
- Connect to Microsoft Power Platform services with finance and operations apps
- Work with tools and best practices to integrate finance and operations apps with Microsoft Power Platform
- Work with data management in finance and operations apps
- Perform user acceptance testing in finance and operations apps
- Prepare to go-live with finance and operations apps
- Use RSAT with Dynamics 365 Commerce
- Work with analytics and reporting in finance and operations apps
- Configure electronic reporting in Dynamics 365 Finance

COURSE OUTLINE

Module 1: Explore the ecosystem and main components of finance and operations apps
- Explore the Dynamics 365 ecosystem.
- Learn about the main components of finance and operations apps.
- Learn about on-premises and cloud deployment options.
- Explore the development and deployment process for finance and operations apps.

Module 2: Explore the technical architecture of finance and operations apps
- Differentiate between on-premises and cloud architecture of finance and operations.
- Learn about the purposes and relationships between packages, models, and elements.
- Learn about the application components and architecture.
- Detail metadata management and source control processes.
- Use and understand the purpose of Lifecycle Services.

Module 3: Explore design and deployment considerations for finance and operations apps
- Learn about design patterns and process for code deployment.
- Identify code deployment strategies.
- Learn about post-deployment tasks and activities.

Module 4: Manage finance and operations apps implementations by using Lifecycle Services
- Performing support tasks.
- Provisioning and managing environments.
- Managing asset libraries.
- Managing the code upgrade process between versions of finance and operations apps.

Module 5: Work with performance and monitoring tools in finance and operations apps
- Diagnose performance issues by using Trace parser.
- Explore load testing by using the Performance SDK.
- Monitor performance by using the SQL Insights dashboard.
- Monitor server Health metrics in Microsoft Dynamics Lifecycle Services.

Module 6: Manage source code by using version control in finance and operations apps

- Connect your developer environment to an Azure DevOps project.
- Use best practices for version control.
- Manage and perform code reviews.

Module 7: Explore the test framework and tools in finance and operations apps

- Capabilities and benefits of the unit test framework.
- Capabilities and benefits of Task Recorder.
- Benefits of the Best Practices tool.

Module 8: Explore reporting tools in finance and operations apps

- Learn about the capabilities of various reporting tools in finance and operations apps.
- Determine which types of reports should be used.
- Create and modify a report data source.
- Learn about reporting and security requirements.
- Deploy reports with PowerShell.
- Deploy reports with Visual Studio.

Module 9: Set up a VHD for finance and operations

- Learn how to download the VHD from Microsoft Dynamics 365 Lifecycle Services.
- Learn the process of uploading the VHD.
- Use the VHD for development and testing.
- Learn how to set up Microsoft SQL Server Management Studio, Visual Studio, and more.

Module 10: Start developing for finance and operations apps by using Visual Studio

- Create and build projects and deployable packages in Visual Studio.
- Create and use label files
- Use the Application Explorer to manage elements.
- Synchronize data dictionary changes with the application database.
- Work in the Element Designer to create elements.

Module 11: Get started with development using X++ in finance and operations apps

- Identify components of classes.
- Create an instance of a class.
- Create objects in a constructor.
- Manipulate data by using X++.
- Identify the different types of conditional statements.
- Write conditional statements.
- Write loop statements.
- Use iterative statements.
- Identify exception handling statements.
- Write exception handling statements.
- Learn about the use and function of const values.

Module 12: Develop object-oriented code in finance and operations apps

- Discover the importance of object-oriented programming for finance and operations apps.
- Learn the importance of abstract classes and inheritance in object-oriented programming.
- Learn about interfaces.

- Use the Chain of Command (CoC).
- Learn how scoping is implemented in X++ code.
- Determine when to use references and values.

Module 13: Implement application lifecycle management in finance and operations apps

- Define ALM.
- Learn about the different ALM methodologies.
- Build models.
- Create a project plan for building and testing solutions.
- Identify upgrade scenarios and appropriate tools
- Create processes for release management, change management, and risk management.

Module 14: Build extended data types and enumerations for finance and operations apps

- Identify the different types of EDTs.
- Learn about the use of base enumerations (base enums).
- Identify how EDTs and base enums are viewed in the finance and operations apps user interface.
- Create a base enumeration.

Module 15: Build data models in finance and operations apps

- Define the use of tables in finance and operations apps.
- Create a new table in Visual Studio.
- Create, manage, and extend views, queries, and table maps.
- Manage table properties.
- Add fields and field groups to a table.
- Create an index and a table relation.
- Learn about table methods.

Module 16: Build forms and optimize form performance in finance and operations apps

- Create a new form.
- Apply a form pattern.
- Add a data source to a form.
- Add grids, fields, and groups to a form.
- Understand form methods.
- Discover the types of menu items.
- Create a menu item and add it to a form.
- Create and extend menus
- Run a form and test its functionality.
- Learn about browser-based and Performance Timer tools that are used to optimize form performance.

Module 17: Create classes in finance and operations apps

- Learn about the use of classes in developing for finance and operations apps.
- Create a new class that is added to a project.
- Add methods to a class.
- Review the types of methods that can be used in a class.

Module 18: Build reports for finance and operations apps
- Enable Business document management.
- Design, create, and modify SSRS reports.
- Create and modify a Power BI report by using finance and operations apps data.
- Create and modify an Excel report by using finance and operations apps data.
- Learn how to build SQL statement by using query objects.

Module 19: Build workspaces in finance and operations apps
- Design and build key performance indicators (KPIs).
- Create workspace elements.
- Use Report Definition Language (RDL) to create custom reports.
- Implement reporting components into workspaces.

Module 20: Implement role-based security in finance and operations apps
- Create and modify roles, duties, privileges, and permissions.
- Review the role-based security hierarchy.
- Use and enforce permissions policies.
- Define the extensible data security framework (XDS).
- Apply security permissions.
- Stay compliant with user licensing requirements

Module 21: Apply basic performance optimization in finance and operations apps
- Discover what temporary tables are and when to use them.
- Learn about what set-based statements and row-based operations are, and when to use each.
- Understand and demonstrate different methods for optimizing custom queries.
- Learn about the different caching methods that are possible and when each should be used.

Module 22: Explore extensions and the extension framework in finance and operations apps
- Learn about the reasons for creating extensions.
- Determine when to use the extensibility request form.
- Learn about the risk of intrusive customizations.
- Develop code that will extend the functionality of finance and operations apps.
- Create pre-event and post-event handler classes.
- Implement the SysOperationSandbox framework.

Module 23: Extend elements in finance and operations apps
- Create extensions to customize finance and operations apps.
- Extend a table.
- Create a form extension.

Module 24: Consume business events in finance and operations apps
- Learn about the business events framework.
- Implement new business events through class extension.
- Consume business events.
- Extend and existing business event
- Business events in Microsoft Power Automate.
- Role based security for business events.

Module 25: Work with workflows in finance and operations apps
- Use the workflow architecture, elements, and actions
- Create and set up workflows
- Configure workflow properties
- Configure a manual task in a workflow
- Configure an automated task in a workflow
- Configure an approval process in a workflow
- Assign users to workflow elements
- Configure an approval step in a workflow
- Use work items functionality

Module 26: Identify data integration patterns and scenarios in finance and operations apps
- Identify integration web application programming interfaces.
- Explore available data integration scenarios.
- Identify the key differences between synchronous and asynchronous integrations.

Module 27: Implement data integration concepts and solutions for finance and operations apps
- Create a data entity.
- Enable data management capabilities.
- Expose Open Data Protocol (OData) endpoints with data entities.
- Identify custom service endpoints.
- Discover external web services that are available for use.
- Consume external web services.
- Connect to your data with the Microsoft Excel add-in.
- Connect to your data with Microsoft Power Apps.

Module 28: Implement the Data management package API for finance and operations apps
- Import and export APIs between finance and operations apps cloud deployments and on-premises deployments.
- Import and export APIs between on-premises deployments.
- Use GetExecutionSummaryStatus to get the status and availability of APIs.
- Create wrapper classes with C# and X++

Module 29: Data integrations with finance and operations apps
- Set up a data project.
- Set up a recurring data job.
- Define authorization for integrations by using OAuth.
- Monitor the status and availability of entities.
- Develop data transformations.
- Use Microsoft Dataverse to synchronize entities between Dynamics 365 applications.
- Use composite data entities.
- Integrate composite data entities.
- Export composite data entities.
- Learn about Azure Data Lake and Entity Store, and how to change data in Azure Data Lake
- Learn about Microsoft Power Platform convergence.

Module 30: Prepare data for migration to finance and operations apps

- Choose a data integration (import/export) strategy.
- Identify common migration scenarios and tools in finance and operations apps.
- Understand the Bring your own database (BYOD) feature.
- Identify relevant (legacy) systems.
- Identify and import static data that is common between industries.
- Create and review test plans for data migration.
- Identify and extract source data.
- Identify relevant data entities and elements.
- Generate field mapping between source and target data structures.
- Test a data migration and validate output.
- Support the transition between the existing and migrated systems.

Module 31: Manage data sources with external data stores in finance and operations apps

- Learn about the core concepts of Bring Your Own Database (BYOD) and its advantages compared with the Entity Store.
- Create and manage custom data sources.
- Learn how to optimize data entities to achieve better performance

Module 32: Integrate finance and operations apps with Microsoft Azure

- Develop and integrate by using Logic Apps.
- Integrate finance and operations apps with enterprise applications.
- Develop and integrate Microsoft Power Platform.
- Automate EAI, B2B, EDI, and business processes.
- Consume data from Azure Machine Learning (ML) service.
- Enable connectivity with external services.

Module 33: Connect to Microsoft Power Platform services with finance and operations apps

- Connect your finance and operations apps data with Power Automate.
- Learn about triggers and actions in Power Automate that are used in finance and operations apps.
- Connect to your finance and operations apps data with Power Apps.
- Learn about the Common Data Model to bring data from multiple systems and applications together.

Module 34: Work with tools and best practices to integrate finance and operations apps with Microsoft Power Platform

- Review key dual-write concepts.
- Learn about dual-write alerts and how to set up alerts and automatic actions for planned and unplanned maintenance.
- Learn about the Pause and Resume features and error management scenarios.
- Explore troubleshooting techniques for dual-write setup, live sync, initial sync, and performance.
- Explore best practices and recommendations for dual-write integration.

Module 35: Work with data management in finance and operations apps

- Identify the correct pattern for a given scenario to use the Data management platform for integration by using data entities.
- Work with the Data management workspace.
- Export data from a legal entity.
- Import data into a legal entity.
- Work with data import and export jobs.
- Clean up the staging tables.
- Work with database movement operations.
- Work with the data sharing framework.

Module 36: Perform user acceptance testing in finance and operations apps

- Test cases and business requirements
- Best practices for recording test cases
- Task recorder
- How to create a BPM library
- How to synchronize and configure your test plan in Azure DevOps
- How to run test cases manually and automatically
- The Regression suite automation tool (RSAT)

Module 37: Prepare to go-live with finance and operations apps

- Prepare for go-live
- Complete the Microsoft Dynamics Lifecycle Services methodology
- Perform User acceptance testing (UAT) for your solution
- Understand the FastTrack Go-live assessment
- Request the production environment

Module 38: Use RSAT with Dynamics 365 Commerce

- Learn about the features of RSAT.
- Learn how to use the Test recorder feature to create, configure, run, investigate, and report on test cases.

Module 39: Work with analytics and reporting in finance and operations apps

- Different types of reports and inquiries in finance and operations apps
- Financial reporting
- Configuring finance and operations apps for Microsoft Power Platform
- Generating and consuming inquiries and reports

Module 40: Configure electronic reporting in Dynamics 365 Finance

- Configure electronic reporting
- Use barcode data sources to generate bar code images
- Add a new electronic reporting provider and mark it as active
- Generate an electronic document in a specific format
- Create electronic reporting configurations

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