

MB - 500 : Microsoft Dynamics 365: Finance and Operations **Apps Developer**

Course Outline

Module 1: Explore the Ecosystem and Main Components

- Understand the Dynamics 365 ecosystem, components of finance and operations apps, deployment options (on-premises and cloud), and the development and deployment process.

Module 2: Technical Architecture

- Differentiate between on-premises and cloud architecture.
- Learn about packages, models, elements, application components, metadata management, source control, and Lifecycle Services.

Module 3: Design and Deployment Considerations

- Explore design patterns, code deployment strategies, and post-deployment tasks.

Module 4: Manage Implementations with Lifecycle Services

- Perform support tasks, provision and manage environments, manage asset libraries, and handle code upgrades.

Module 5: Performance and Monitoring Tools

- Diagnose performance issues with Trace parser, perform load testing with the Performance SDK, and monitor performance using SQL Insights and Lifecycle Services.

Module 6: Manage Source Code with Version Control

- Connect to Azure DevOps, follow version control best practices, and manage code reviews.

Module 7: Test Framework and Tools

- Understand the unit test framework, Task Recorder, and Best Practices tool benefits.

Module 8: Reporting Tools

- Learn about various reporting tools, create and modify report data sources, and deploy reports using PowerShell and Visual Studio.

Module 9: Set Up a VHD

- Download, upload, and use VHD for development and testing. Set up SQL Server Management Studio and Visual Studio.

Module 10: Development with Visual Studio

- Create projects, deployable packages, label files, and use Application Explorer and Element Designer.

Module 11: Development with X++

- Identify class components, create instances and objects, use conditional statements, loops, exception handling, and const values.

Module 12: Object-Oriented Code Development

- Understand object-oriented programming importance, abstract classes, inheritance, interfaces, Chain of Command (CoC), and scoping in X++.

Module 13: Application Lifecycle Management (ALM)

- Define ALM, build models, create project plans, and establish release, change, and risk management processes.

Module 14: Build Extended Data Types and Enumerations

- Identify types of Extended Data Types (EDTs), base enumerations, and their use in the user interface.

Module 15: Build Data Models

- Define and create tables, manage views, queries, field groups, indexes, and table relations.

Module 16: Build Forms and Optimize Performance

- Create forms, apply patterns, add data sources, grids, and fields, understand form methods, and optimize performance using browser-based tools and Performance Timer.

Module 17: Create Classes

- Learn about class usage, create new classes, add methods, and review method types.

Module 18: Build Reports

- Enable Business Document Management, design SSRS reports, modify Power BI and Excel reports, and build SQL statements using query objects.

Module 19: Build Workspaces

- Design KPIs, create workspace elements, use Report Definition Language (RDL), and implement reporting components.

Module 20: Implement Role-Based Security

- Create and modify roles, duties, privileges, and permissions, apply security permissions, understand the extensible data security framework (XDS), and ensure user licensing compliance.

Module 21: Basic Performance Optimization

- Use temporary tables, set-based vs. row-based operations, optimize custom queries, and caching methods.

Module 22: Extensions and Extension Framework

- Understand reasons for extensions, use extensibility request forms, and develop code to extend functionality with pre-event and post-event handlers.

Module 23: Extend Elements

- Create extensions for tables, forms, and other elements to customize finance and operations apps.

Module 24: Consume Business Events

- Learn about the business events framework, implement and consume business events, and integrate with Microsoft Power Automate.

Module 25: Work with Workflows

- Use workflow architecture, create workflows, configure properties, manual and automated tasks, and approval processes.

Module 26: Data Integration Patterns and Scenarios

- Identify integration APIs, data integration scenarios, and differences between synchronous and asynchronous integrations.

Module 27: Implement Data Integration Concepts

- Create data entities, enable data management, expose OData endpoints, and connect with external web services.

Module 28: Data Management Package API

- Use import/export APIs, GetExecutionSummaryStatus, and create wrapper classes with C# and X++.

Module 29: Data Integrations

- Set up data projects, recurring jobs, authorization with OAuth, monitor entities, develop data transformations, and use Microsoft Dataverse.

Module 30: Prepare Data for Migration

- Choose data integration strategies, identify migration scenarios and tools, map fields, and support system transitions.

Module 31: Manage Data Sources with External Stores

- Understand BYOD vs. Entity Store, create/manage custom data sources, and optimize data entities.

Module 32: Integrate with Microsoft Azure

- Use Logic Apps, integrate with enterprise applications, and connect with Azure Machine Learning and external services.

Module 33: Connect to Microsoft Power Platform

- Connect data with Power Automate and Power Apps, and use the Common Data Model.

Module 34: Best Practices for Power Platform Integration

- Review dual-write concepts, alerts, error management, and best practices.

Module 35: Data Management Best Practices

- Use the Data management platform, work with import/export jobs, clean up staging tables, and manage data sharing.

Module 36: Perform User Acceptance Testing

- Create and configure test plans, use Task Recorder, RSAT, and synchronize test plans in Azure DevOps.

Module 37: Prepare for Go-Live

- Complete Lifecycle Services methodology, perform User Acceptance Testing (UAT), and request the production environment.

Module 38: Use RSAT with Dynamics 365 Commerce

- Learn about RSAT features, including Test Recorder for test case management.

Module 39: Analytics and Reporting

- Explore types of reports and inquiries, configure for Microsoft Power Platform, and generate reports.

Module 40: Configure Electronic Reporting

- Configure electronic reporting, use barcode data sources, and generate electronic documents in specific formats.