

SAP

S/4 HANA - ABAP



Techno Pad

Course : S/4 HANA - ABAP

Duration :

Fee :

Demo on :

Course Contents

INTRODUCTION TO SAP AND ABAP/4 LANGUAGE

- Overall introduction to ERP
- Different types of ERP packages and software's
- Introduction SAP R/3 architecture
- Introduction to SAP ABAP/4 Programming
- ABAP/4 editor (Focus on the functionalities of new ABAP editor)
- Data types
- Output statements
- Arithmetic operations
- Reporting techniques

Data dictionary

- Types of database tables
 - Transparent Tables
 - Pool Tables
 - Cluster Tables
- Data element
- Domain
- Structures
- Table Types
- Search helps
 - Collective Search helps
 - Elementary Search helps
- Types of Views
 - Database View
 - Projection View
 - Maintenance View
 - Help View
- Type groups
- Table maintenance generator and T-code creation
- Table Events
- Primary and foreign keys
- Check table and value tables
- Different types of Lock objects
- Creation of Lock Objects

Internal Tables

- Internal tables
 - Declaration
 - Processing

- Population
- Internal table operations
- Types of Internal tables
 - Standard Internal tables
 - Sorted Internal tables
 - Hashed Internal tables
- Control Break statements

Modularization

- Modularization techniques
 - Includes
 - Subroutines
 - Macros
- Function Group/Function modules
 - Creating Function Groups
 - Creating Function Modules
 - Defining Exceptions in Function modules
 - Creating RFC (Remote Function Call) function modules
 - Update function module

Open SQL

- Introduction to Open SQL's
- Introduction to Native SQL's
- Database Table Operations
 - Select Statements
 - Insert Statements
 - Update Statements
 - Modify Statements
 - Delete Statements

REPORTING

- Introduction to Reports
- Report events and Interactive events
 - Load of Program
 - Initialization
 - Selection-screen
 - At selection-screen
 - Start-of-selection
 - End-of-selection
 - Top-of-page

- End-of-page
- AT PF-STATUS
- At line selection
- TOP-OF-PAGE DURING LINE SELECTION
- At User Command
- Hide and hotspot
- Debugging techniques
 - Breakpoint creation
 - Watch point creation
 - Emphasize on the usage of new designer
- Mastering the important tools such as the SQL trace, Debugger, Code Inspector and runtime analyzer
- Develop Reports using tree (hierarchical) form of data
- Variants
- Conversions exists
- Message class creation & message types and handling messages
- Creating and handling buttons
- Menu painter

ALV and Interactive/Editable ALV Reporting

- Introduction
- Types of ALV
- Simple report to display simple ALV list using function modules
- Simple report to display simple ALV grid using function modules
- Interactive ALV reports
- Editable ALV Reports
- Adding new buttons in the ALV toolbar and handling events.
- Working with ALV using classes (List, Grid, and Tree).
- Usage of latest class library in ECC 6.0 for ALV

DIALOG PROGRAMMING

- Introduction to screen painter and dialog programming
- Flow logic
 - PAI
 - PBO
 - POV
 - POH
- Screen designing
 - Screens
 - Subroutines

- Menus/GUI statuses
- Transaction codes
- Programming in object browser
 - TOP Include
 - PBO Include
 - PAI Include
- Field validations
 - Chain and End-chain
 - On Field/On Input/On Request
- Creation of UI elements
 - List Box/Drop down
 - Sub screens Operations
 - Table controls Operations
 - Tap strips Operations
- Dynamic screen
 - Call screen
 - Set screen
 - Leave to screen
 - Leave screen
- Processing of list from transaction and vice versa
- Assigning Function Code Attributes & Using AT EXIT-COMMAND
- Screen table and its fields

Dynamic Dialog programming (Advanced)

- Creating dynamic screens using classes
- Creating dynamic Tab strips and Table controls and etc., UI elements
- Text Editor Examples
- Custom controller examples
- Dynamic screen modifications

CONVERSIONS

- Why data transfers
- Introduction to BDC
- File handling
 - Presentation server
 - Application server
- BDC Recording
- Methods in BDC
 - Call transaction
 - Session method

- Error Handling in Call Transaction
- Handling Table Controls in BDC
- BAPI Method for data load
- Different types of LSMW methods
 - Standard Batch/Direct Input method
 - Batch Input Recording
 - Business Object Method (BAPI)
 - IDOC
- Legacy System Migration Workbench (LSMW)
 - Different methods
 - Steps to write
 - Flat file creation
 - Uploading data

FORMS

Sap Scripts

- Introduction
- Layout sets
- Script elements
- Modifying standard layout sets(by using subroutines)
- Including logo

SMARTFORMS

- Introduction to smartforms
- Global setting
 - Form Attributes
 - Form Interfaces
 - Global Definitions
- Creating Pages and Windows
- Types of windows in Smartforms
- Standard texts
- Graphics management
- Writing print program and designing layouts
- Output type configuration to standard orders
- Creating Watermark pages
- Creating Smart Styles for Smartforms
- Text Modules

MISCELLANEOUS TOPICS

- SAP System Landscape
- Correction and Transport System(CTS)
- Transport Organizer
- Workbench Requests
- Customizing Requests
- Task Request creation
- Coping and Merging Transport Requests
- Release Requests.
- SAP memory,
 - SET/GET parameters.
- ABAP memory.
 - Imports/Exports
- Shared Memory
- Logical Database and Handling Events(LDB)
- Field symbols

INTERFACES (CROSS APPLICATIONS)

- Introduction to CA
- RFC destination
- Working with RFC function modules

ALE

- Defining logical systems used for ALE interfaces
- Outbound/Inbound processing
- Transferring of master data from one system to another system
- Distribution model view
 - IDOC filtering
 - Segment filtering using filter objects
 - Reduced IDOC
- Outbound using change pointers methods

EDI

- Overview and architecture


BAPI's and Business Objects

- Introduction to BAPI
- Overview of Business Object
- Step By Step Approach followed to create BAPI

- Enhance standard Business Objects

ENHANCEMENTS

Enhancement Framework and Switch framework

- Introduction to enhancements
 - Different ways of doing enhancements
 - Types of User Exits
 - Field Exits
 - Menu exit
 - Function exit
 - Screen Exit
 - Introduction to BADI
 - Brief note on New BADI's
 - Enhancement Spot
 - Implicit Enhancement and Explicit Enhancement
 - Enhancement Section
 - Enhancement Implementations
 - Function Module Enhancements
 - Class Enhancements
 - Pre-exit
 - Post-exit
 - Overwrite-exit
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OOABAP Programming (with advanced topics)

Introduction on OOABAP

Difference between OOABAP and other programming languages

Classes

- Global Class
- Local Class
- Instance components & Static Components

Objects & Objects references

- Implicit Objects
- Explicit Objects
- Differences Between Implicit & Explicit Objects
- Garbage Collection

Attributes

- Instance Attributes
- Static Attributes
- Difference between instance and static attributes
- Using parameters. (Importing, exporting, Returning etc.)

Methods:

- Static methods
- Instance methods
- Difference between static and instance methods

Constructors:

- Static Constructor.
- Instance Constructor
- Difference between Static & Instance Constructor
- Destructors

Inheritance (Local & Global)

- Single Inheritance
- Multi level inheritance
- Multiple inheritance
- Inheritance hierarchy
- Instance & Static Constructors in Inheritance
- Visibility of static components in sub classes
- Visibility of Instance Component in sub classes bhcg

Polymorphism (Local & Global)

- Method overloading

- Method overriding
- Redefinition Keyword (Local & Global)
- Super keyword
- ME keyword for Self-Reference

Abstraction (Local & Global)

- Abstract Methods
- Abstract Classes

Interfaces (Local & Global)

- Composite Interface
- Implementation of interfaces in local and global class
- Advantages of interfaces
- Difference b/t Abstract class and Interface
- Aliases (Local & Global)

Final (Local & Global)

- Final Class
- Final methods
- Friend class
- Singleton Class

Event Handling, Exception handling & Miscellaneous

- Try-catch block
- Local & Global Exceptions
- OOABAP Reporting using custom classes and Methods
- Using Select-options in OOABAP Reporting
- Converting ABAP reports into OOABAP reports
- Converting Local Class to Global Classes
- Creating Transaction Codes

Dynamic Programming using OOABAP (Advanced)

Persistent Classes

- Create Persistent classes
- Persistence Service for Persistent Objects
- Defining Persistence Representation
- Instantiating Persistent class objects
- Handle exceptions in Persistent classes

Generic data type references and Casting

- Create Generic Data Types
- Create Field Symbols
- Data references
- Narrow Casting (up-casting)
- Wide Casting (Down- casting)
- Casting between Data References
- Casting in Field symbols

Proxy Classes

- Generating Proxy Classes
- Enhance existing Proxy Classes
- Calling Proxy Classes

Factory Classes and Factory Methods

- Generating Reports using Factory classes
- Calling Factory methods
- Handling exceptions in Factory classes and methods
- Interactive events in Factory Classes
- Dynamic structure and Internal table generation
- Dynamic method calling

ABAP on SAP HANA

- Introduction to HANA technical concepts
- HANA studio
- Access HANA DB using open SQL
- Access HANA DB using Secondary connection
- Tables in HANA Studio
- Performance Guidelines in HANA
- ADBC
- Native SQL
- Working with views on SAP HANA studio
- Consuming HANA views in ABAP
- Consuming HANA procedures in ABAP
- Creating Analytic View

SAP HANA Introduction

- Features and Architecture of HANA Database

ABAP HANA Introduction

- Role of ABAP consultants in SAP HANA Data to Code Vs Code to Data Approach Introduction to HANA Studio

Native HANA Development

- Introduction to SQL and Database Objects Schema
- Row Store Table Vs Column Store Table Database Tables – CRUD Operations Transaction Control Statements
- Order By, Group By, Having, Where Clauses Primary key and Foreign Key Constraints Global Vs Local Temporary Tables
- Defining and Managing Triggers Sequences
- Synonyms
- Altering Database Objects Table Types
- Procedures Functions
- Temporary Internal Tables Conditional and Looping statements Cursors
- Exception Handling Views
- Arrays Joins Indexes
- SQL Functions

STORED PROCEDURES

- Creating Stored Procedures Creating Database Procedure Proxies
- Consuming Stored Procedure from ABAP Reports Scalar Functions

- Table Functions

ADBC (ABAP DATABASE Connectivity)

- Introduction to ADBC Framework
- Consuming Select Queries in ABAP Reports using ADBC Parameter Binding in Queries using ADBC
- Consuming Stored Procedures using ADBC
- Parameter Binding in Stored Procedures using ADBC Accessing DDL and DML statements using ADBC

AMDP (ABAP Managed Database Procedures)

- Introduction to AMDP and ADT
- Creating AMDP's
- Consuming AMDP's from ABAP Reports
- AMDP Vs Stored Procedures Passing Parameters to AMDP
- Select-option functionality in AMDP

IDA (Integrated Data Access)

- Traditional ALV Vs ALV IDA Report Development using ALV IDA
- Manipulating Field catalog and Toolbar in ALV IDA Parameters and Select-Options in ALV IDA

CDS (CORE DATA Services)

- Introduction and Components of CDS Views CDS simple views
- Consuming CDS views from ABAP Reports and ALV IDA Reports CDS views with parameters
- Interactive ALV
- Select-option functionality in CDS views
- CDS Views with Functions and Arithmetic Expressions CDS Views with Joins and Associations
- CDS view Table Functions
- Exposing CDS Views as ODATA Service CDS View Extension

HANA MODELING

- Introduction to HANA Modeling
- Creating Attribute, Analytic, Graphical Calculation Views Creating External Views for HANA Modeling Views
- Consuming External Views from ABAP Reports
- Creating Graphical Calculation views integrating with Table Function

Techno pad

A large, faded watermark of the Techno Pad logo is centered on the page. The logo consists of a stylized 'TP' inside a square frame with rounded corners, all in a light blue color.

Contact us for more details

9581336333

9703357555