



ABAP COURSE CONTENT

I. BASICS

1. Introduction to ERP

What is ERP?

Why we need ERP?

Different types of ERPs

Advantages of ERP

2. Introduction to SAP & 3-Tier architecture

What is SAP?

Advantages of ERP

History of SAP?

SAP R/1 & R/2 architecture

SAP R/3 architecture

Advantages of 3-Tier architecture

3. Introduction to ABAP/4

What is an ABAP?

Log on to SAP Environment

SAP Easy access

ABAP Workbench tools

Different workbench tools

F1 Help & F4 Help

Mandatory & Optional fields

Packages

Types of packages

Using **DATA** statement

4. Basic ABAP Programming

Data types & Different elementary data types

WRITE statement

Data Objects

Constants

Difference between **TYPE & LIKE**

TABLES statement

System fields or **System Variables**

PARAMETERS and its options

SELECT-OPTIONS and its options

Selection texts and **Text symbols**

4.1 Conditional Statements

IF-----ENDIF

CASE--- ENDCASE

Difference between IF & CASE

4.2 Loops

DO-----ENDDO

Terminating loops

CHECK, CONTINUE, EXIT commands

WHILE-----ENDWHILE

Difference between DO & WHILE loops

4.3 Strings

What are strings?

Different string operations

TRANSLATE, REPLACE, STRLEN, CONCATENATE, SPLIT, SHIFT...etc

4.4 ABAP Dictionary

Introduction to ABAP Dictionary

Objects of ABAP Dictionary

Tables

Types of tables-**Transparent, Pooled, Clustered**

Different approach to create the tables

Data Elements and Domains

Create Transparent tables

Handling currency and Quantity fields

Field labels

Primary key and foreign key

Views-Databaseview, Projectionview, Helpview, Maintenanceview

Structures-Include structures and Append structures

Search helps-Elementary search help and Collective search help

Lock objects

4.5 Open SQL

What is OPEN SQL?

OPEN SQL and NATIVE SQL

Using OPEN SQL Commands

4.6 Internal Tables

Purpose of internal tables

Different ways to declare internal tables

Obsolete ways to declare internal tables

Internal tables with and without header line

INSERT, MODIFY, DELETE, CLEAR, REFRESH, FREE...etc statements

Internal table types-STANDARD, SORTED and HASHED

4.7 Modularization Techniques

Subroutines

Creating subroutines

Restrictions to subroutines

Different ways to pass parameters to subroutines

Function modules & Function groups

Difference between subroutines and function modules

INCLUDE programs & reusability

MACROs

Limitations of MACROs

4.8 Debugging

Usage of Debugger

Different types of **Breakpoints** and usage

Watch point usage

II. REPORTS

Introduction to Reports

Different types of reports

Selection-screens

Message classes

Message types (Error, Warning, Information, Status, Abend, Exit)

Messages without using the message class

Classical Reports & Events

Interactive Reports & Events

Using **Variants**

LDB(Logical Database)

ABAP Query (InfoSets, User groups and Queries)

Joins—Inner join and left outer join

Nested select statements

For all Entries

Control break statements(AT First, AT New etc)

HIDE technique

GET CURSOR, Read Line, SUBMIT, SUBMIT and RETURN etc.,

Using checkboxes & Radio buttons

III. Transactions/Dialog (Module pool) programming

Overview of Dialog Programming

Understanding flow logic events

Creating own Transactions

AT EXIT-COMMAND

CHAIN-ENDCHAIN command

Assign GUI status to screens

Dynamically calling screens

-Set screen, leave screen, leave to screen and Call Screen

Sub screens

Table Controls, Step loops

Tab strip Controls

IV.BDC(Batch Data Communication)

Overview of BDC:

Files Formats:

- a) **Local Files** (Upload,Download etc)
- b) **Sequential Files** (Opendataset,ReadDataset, Transfer etc.)

Data Transfer methods :

Session method

Call Transaction method

Differencebetweenessionmethodandcalltransaction method

Recording method

LSMW(tool)

Error handling in call transaction method

V. SAP Scripts

Introduction to sap scripts

Components of sap scripts

LayoutSet-Header,Page,Window,PageWindow,Paragraph
formats, Character formats,Text elements

Print program or Driver program

Function modules associated with sap scripts

Standard Texts

Inserting Logos

SAP Script symbols & Control commands

Modifications to Form and Print program

Copying forms etc.

Smart Forms

Introduction to Smart forms

Creating Smart forms

Advantages of smart forms

Standard texts

Graphic management

Calling a Form from print program

Convert smart form as PDF and send to mail

Difference between SAP Script and Smart Forms

Advanced ABAP

1. SAP Enhancements:

1.1 User Exits and Customer Exits

Different types of customer exits

Function exits

Menu exits

Screen exits

Different ways to find exits Difference between user exits & customer exits

1.2 Enhancement Framework Different types of frameworks **Implicit framework**
Explicit framework

a) Enhancement Points

b) Enhancement Sections

c) BADIs (Business Add-Ins)

Introduction BADIs

How to find the BADIs

Implementation of BADIs

Defining and implementing custom BADIs

2.Object Oriented ABAP (OO ABAP/ABAP Objects)

Introduction to Object-Oriented Programming

OO-Concepts

- Abstraction
- Encapsulation
- Inheritance
- Polymorphism

Types of classes

- Local classes
- Global classes

Instance Methods/Static Methods

Instance attributes/Static attributes

Constructor/Static constructor

Casting-Narrow casting (Down Casting)

- Widening casting (up casting)

Interfaces

Difference between classes & interfaces

Multiple inheritances by interfaces

Handling exceptions-TRY-ENDTRY, CATCH commands

Handling Events

3. ALV Reports

ALV Reports Introduction

Normal ALVs (Using ALV functions)

Different type of ALVs

Using SLIS

ALV List

ALV Grid

Hierarchical ALV

Blocked ALV

Using ALV events, fieldcats Layouts

Object Oriented ALV (OOALV)

Useful standard classes

Useful standard methods

Useful table types of OOALV

Using Custom container in OO ALV

Differences between Normal ALVs and OOALV

CROSS APPLICATIONS (CA)

IDOCs (Intermediate Documents)

Features and structure of IDOC

IDOC Structure

-Control Record

-Data Record

-Status Records

Segment definition and components

Creating Segments

Idoc types

Message types

Creating Idoc types (Basic and Extension)

Creating Message types and Process

Assigning Idoc type to Message type

RFC (Remote Function Calls)

Introduction of RFC

Communication mechanisms through RFC

ABAP interfaces (sRFC, tRFC, aRFC)

Difference between tRFC and aRFC

ALE (Application Link Enabling)

Distributed Systems

ALE Services and features

ALE Inbound and Outbound process

ALE Configuration (Logical systems, RFC Destination, Model view, Port, Partner Profiles etc)

ALE Distribution Scenarios

Transferring of Master Data

BAPI (Business Application Programming Interface)

What is BOR (Business Object Repository)?

What is BAPI, Rules? Features and

applications of BAPI Diff b/w RFC

and BAPI Creating Business Object

types Working with a standard

BAPIs Developing Custom BAPIs

Reports using BAPI

ABAP PROJECT

1. Types of SAP Projects

- Support Projects
- Implementation Projects

2. How we work in a project

3. Technical Specification (TS)

4. Functional Specification (FS)

5. TDD (Technical Designed Document)

6. FDD (Functional Designed Document)

7. UTP (Unit Test Plan)

8. Naming Standards in the Project

9. Coding Standards in the Project

10. Code Inspector, Code Review

11. Tasks and Incidents/Tickets Resolutions in the Support Project

12. Transport Management

13. Resume Preparation & Guidance