Tatvam
CONSULTING

SAP S/4 HANA ABAP

(ADVANCED BUSINESS APPLICATION PROGRAMMING)

About the course:

Duration: 45-75 Hours

This SAP S/4HANA ABAP course provides a comprehensive understanding of ABAP programming, focusing on customization, development, and integration. Learn core concepts such as syntax, data types, control structures, and database object management with the ABAP Data Dictionary. Gain hands-on experience with ABAP Development Tools and explore object-oriented programming, including classes and methods. The course covers enhancing SAP applications using user exits and BADI, along with Web Dynpro ABAP for creating user interfaces. You'll also learn to develop interactive reports with the ABAP List Viewer. By the end, you'll be equipped to implement ABAP solutions to optimize and extend SAP functionalities efficiently.

Focus Areas:

- **ERP Applications**: Gain comprehensive knowledge of ERP systems and their integration within business processes.
- **Business Process Knowledge**: Understand core business processes and how SAP solutions optimize them for efficiency and success.

Why Choose US?

- **Industry Expertise:** Learn from experienced professionals who bring real-world knowledge and insights.
- **Practical Learning:** Get hands-on experience with real projects to develop job-ready skills.
- **Up-to-Date Curriculum:** Master the latest SAP trends, technologies, and tools to stay ahead in your career.
- **Tailored Guidance:** Benefit from personalized mentorship that helps you reach your goals with customized support.
- **Proven Career Success:** Leverage our strong track record of successful placements to kickstart your professional journey.
- **Networking & Collaboration:** Connect with peers and industry experts for valuable opportunities and professional growth.
- **Continuous Learning:** Gain access to resources that allow you to keep learning and evolving throughout your career.

Course Content

Introduction to SAP

Understand SAP and its role in streamlining business processes.

1. Introduction to ABAP Programming

- Overview of ABAP and its role in SAP S/4 HANA
- Key features and capabilities of ABAP
- Setting up the ABAP Development Environment

2. ABAP Programming Fundamentals

- ABAP syntax and structure
- Data types and variables
- Operators and expressions
- Control structures (LOOP, IF-ELSE, CASE)

3. Working with the ABAP Data Dictionary

- Understanding the ABAP Data Dictionary
- Defining and managing tables, views, and indexes
- Creating data elements, domains, and search helps
- Creating and managing foreign keys and relationships
- Table maintenance and transport management

4. ABAP Development Tools

- Introduction to ABAP Development Tools (ADT)
- Working with Eclipse for ABAP development
- Debugging and performance analysis in ABAP
- Transport Management and Version Control in ADT

5. Object-Oriented Programming (OOP) in ABAP

- Understanding OOP concepts in ABAP (Classes, Objects, Inheritance)
- Creating and managing classes and objects
- Methods and their implementation
- Constructors and Destructors
- Interfaces and Abstract Classes
- Exception handling in OOP

6. Enhancements and Customizations in SAP

- Overview of user exits and BADIs (Business Add-Ins)
- Implementing user exits to modify standard functionality
- Using BADI to add custom logic without modifying SAP standard code
- Enhancing reports and transactions with custom logic

7. Web Dynpro ABAP for UI Development

- Introduction to Web Dynpro ABAP for web-based application development
- Web Dynpro architecture and components
- Designing UI screens and user interfaces
- Handling events and binding data to UI elements
- Integrating Web Dynpro ABAP with backend logic

8. Reports and Interactive Lists in ABAP

- Types of ABAP reports (Classical, ALV, Interactive)
- Creating interactive reports using ABAP List Viewer (ALV)
- Event handling in interactive reports
- Using dynamic selections and layouts in reports

9. ABAP Performance Optimization Techniques

- Identifying performance bottlenecks in ABAP programs
- Optimizing database accesses (SELECT statements)
- Using buffering and internal tables for performance improvements
- Tips for efficient ABAP code

10. Working with External Systems in ABAP

- Introduction to BAPI (Business Application Programming Interface)
- Remote Function Calls (RFC) in ABAP
- ALE/IDOC for data exchange between systems
- Integration with external databases and web services

11. SAP S/4 HANA Specific Features in ABAP

- Understanding SAP HANA database and its impact on ABAP programming
- Using Open SQL and Native SQL in ABAP for HANA
- Handling real-time data processing and analytics in ABAP
- SAP HANA-optimized coding techniques for ABAP

12. Advanced ABAP Topics

- ABAP Objects in SAP S/4 HANA
- Working with SAP Fiori and UI5 with ABAP
- REST and SOAP-based web services in ABAP
- Dynamic programming techniques in ABAP

13. ABAP Testing and Debugging

- Unit testing techniques for ABAP
- Using ABAP Test Cockpit (ATC) for static analysis
- Debugging ABAP code and performance traces
- Handling errors and exceptions in ABAP programs

14. ABAP Best Practices and Code Quality

- Following coding standards and guidelines in ABAP
- Code reviews and peer feedback
- SAP-specific best practices for ABAP development
- Handling version control in ABAP projects

15. Real-World Projects and Case Studies

- Hands-on exercises to build ABAP applications
- Case studies involving real-world SAP customization and integration
- End-to-end project implementations using ABAP

Earn Your Certificate of Completion!

Upon successfully completing the course, you will receive a **Certificate of Completion**, recognizing your hard work and mastery of the skills taught throughout the program. This certificate is a valuable credential that demonstrates your dedication to learning and your ability to apply the knowledge in real-world scenarios.

What You'll Gain:

- **Proven Expertise**: Showcase your skills in the subject matter.
- **A Valuable Credential**: Enhance your resume and LinkedIn profile with an industry-recognized certificate.
- **Career Boost**: Open doors to new job opportunities or advancement in your current role.

Take the next step in your professional journey, earn your certificate, and demonstrate your commitment to continuous growth and learning!