multisoft
Systems

SAP Build Code & AI Extensions

COURSE CONTENT

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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with leading technologies to bring world-class one-on-one and certification training. Intending to empower professionals and businesses across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training, a comprehensive learning solution with lifetime e-learning access, after-training support and globally recognized training certificates.

About Course

SAP Build Code & AI Extensions Training by Multisoft Systems is a technical, hands-on program focused on creating modern and intelligent SAP applications on SAP BTP. The course covers SAP Build Code, CAP, SAP Fiori, Joule, SAP AI Core, generative AI hub, APIs, integration, security, testing, and deployment. Participants gain practical exposure to AI-assisted development and enterprise extension scenarios while learning how to create cloud-native solutions aligned with SAP clean core principles.

Module 1: Introduction to SAP Build Code and SAP BTP Development

- ✓ Overview of SAP Business Technology Platform
- ✓ SAP application development landscape
- ✓ Introduction to SAP Build
- ✓ Understanding SAP Build Code
- ✓ SAP Build Code within the SAP Build portfolio
- ✓ Pro-code development scenarios
- ✓ Cloud-native application development concepts
- ✓ Side-by-side extensions on SAP BTP
- ✓ Clean-core principles and extension strategies
- ✓ Overview of AI-assisted application development
- ✓ Typical enterprise use cases for SAP Build Code

Module 2: SAP Build Code Environment and Development Workspace

- ✓ SAP Build Code architecture and components
- ✓ Understanding development projects and workspaces
- ✓ Creating and configuring development projects
- ✓ Development tools and project structure
- ✓ Source code organization
- ✓ Working with repositories
- ✓ Git-based version control concepts
- ✓ Project configuration and dependencies
- ✓ Development productivity features

- ✓ Running applications in the development environment
- ✓ Debugging fundamentals
- ✓ Managing development configurations

Module 3: Application Development with SAP Cloud Application Programming Model (CAP)

- ✓ Introduction to SAP Cloud Application Programming Model
- ✓ CAP architecture and development approach
- ✓ CAP project structure
- ✓ Understanding CDS
- ✓ Creating CAP projects
- ✓ Defining domain models
- ✓ Entities, types, associations, and compositions
- ✓ Defining application services
- ✓ Service exposure
- ✓ OData services with CAP
- ✓ CAP runtime concepts
- ✓ Node.js development considerations
- ✓ Understanding CAP application lifecycle

Module 4: Data Modeling, Services, and Business Logic with CAP

- ✓ Advanced CDS data modeling
- ✓ Relationships and associations

- ✓ Compositions and reusable models
- ✓ Namespaces and contexts
- ✓ Service definitions
- ✓ Projections and views
- ✓ Implementing custom business logic
- ✓ Event handlers
- ✓ Before, on, and after event processing
- ✓ Validations and business rules
- ✓ CRUD operations
- ✓ Queries and data access
- ✓ Working with persistence
- ✓ SAP HANA Cloud integration concepts
- ✓ Transactions and error handling
- ✓ Consuming external services
- ✓ Service configuration and bindings

Module 5: SAP Fiori and SAPUI5 Application Development

- ✓ SAP Fiori development concepts
- ✓ SAPUI5 fundamentals
- ✓ SAP Fiori elements overview
- ✓ Creating user interfaces for CAP applications
- ✓ Connecting frontend applications with CAP services
- ✓ Working with OData-based applications
- ✓ Metadata-driven application development
- ✓ List Report and Object Page concepts
- ✓ UI annotations

- ✓ Navigation and application flow
- ✓ Extending generated applications
- ✓ SAP Fiori application configuration
- ✓ Previewing and testing applications
- ✓ Frontend-backend integration considerations

Module 6: Joule for Developers and AI-Assisted Development

- ✓ Introduction to Joule for developers
- ✓ Role of generative AI in SAP development
- ✓ AI-assisted development within SAP Build Code
- ✓ Using natural-language assistance during development
- ✓ Code generation and development assistance
- ✓ Generating application artifacts
- ✓ Assistance with data models and services
- ✓ Supporting UI development
- ✓ Understanding generated code
- ✓ Reviewing and refining AI-generated outputs
- ✓ Troubleshooting with AI assistance
- ✓ Developer productivity scenarios
- ✓ Responsible use of AI-generated code
- ✓ Human validation and governance considerations

Module 7: SAP BTP Service Integration and Application Connectivity

- ✓ SAP BTP service landscape for application development
- ✓ Service instances and bindings
- ✓ Consuming SAP BTP services
- ✓ Destination service concepts
- ✓ Connectivity fundamentals
- ✓ Authentication and authorization considerations
- ✓ Connecting applications with SAP systems
- ✓ Integration with SAP S/4HANA scenarios
- ✓ Working with APIs
- ✓ REST and OData service consumption
- ✓ External service integration with CAP
- ✓ Managing credentials and configurations
- ✓ Environment variables and application configuration
- ✓ Resilient integration considerations

Module 8: Generative AI and AI Extensions on SAP BTP

- ✓ Generative AI concepts for SAP applications
- ✓ AI extension architecture
- ✓ SAP BTP AI capabilities overview
- ✓ Understanding SAP AI Core and related services
- ✓ Generative AI Hub concepts
- ✓ Foundation model access concepts
- ✓ Model selection considerations

- ✓ Prompt design fundamentals
- ✓ Prompt templates and contextual prompting
- ✓ Integrating generative AI capabilities into applications
- ✓ Calling AI services from application logic
- ✓ Processing model responses
- ✓ Structured output considerations
- ✓ Enterprise data grounding concepts
- ✓ Retrieval-augmented generation concepts
- ✓ Security and privacy considerations for AI applications
- ✓ Responsible AI considerations

Module 9: Developing AI-Enabled SAP Applications and Extensions

- ✓ Identifying AI extension opportunities
- ✓ Designing AI-enabled application architecture
- ✓ Combining CAP applications with AI capabilities
- ✓ Creating AI-enabled business services
- ✓ Integrating prompts into application workflows
- ✓ Context-aware AI interactions
- ✓ Connecting enterprise data with AI workflows
- ✓ AI-assisted document and text processing scenarios
- ✓ Summarization use cases
- ✓ Classification and information extraction scenarios
- ✓ Intelligent recommendations
- ✓ Conversational enterprise application scenarios

- ✓ Handling AI responses within SAP applications
- ✓ Error and fallback handling
- ✓ Managing prompt and application logic
- ✓ AI extension performance considerations
- ✓ Governance considerations for enterprise AI extensions

Module 10: Application Security, Testing, Debugging, and DevOps

Application Security

- ✓ SAP BTP application security concepts
- ✓ Authentication and authorization
- ✓ Role-based access concepts
- ✓ Protecting CAP services
- ✓ Security considerations for APIs
- ✓ Securing AI-enabled applications
- ✓ Credential and secret handling

Testing and Debugging

- ✓ Application testing strategy
- ✓ Testing CAP services
- ✓ Testing frontend applications
- ✓ Debugging CAP applications
- ✓ API and service testing
- ✓ Troubleshooting integration issues
- ✓ Testing AI-enabled workflows

- ✓ Validating AI-generated responses

DevOps and Lifecycle

- ✓ Source control practices
- ✓ Git workflows
- ✓ Continuous integration and delivery concepts
- ✓ Build and deployment pipelines
- ✓ Managing application versions
- ✓ Development lifecycle considerations
- ✓ Transport and release considerations

Module 11: Deployment, Monitoring, and End-to-End Implementation Project

Deployment

- ✓ Preparing applications for deployment
- ✓ Understanding SAP BTP runtime options
- ✓ Cloud Foundry deployment concepts
- ✓ Application configuration for target environments
- ✓ Service creation and binding
- ✓ Deployment dependencies
- ✓ Deploying CAP applications
- ✓ Deploying frontend applications
- ✓ Post-deployment validation

Monitoring and Operations

- ✓ Application logs
- ✓ Runtime monitoring concepts
- ✓ Troubleshooting deployed applications
- ✓ Monitoring integrations
- ✓ Error analysis
- ✓ AI extension monitoring considerations
- ✓ Application maintenance and lifecycle management

End-to-End Practical Project

- ✓ Define an enterprise extension use case
- ✓ Create an SAP Build Code project
- ✓ Design the CDS data model
- ✓ Implement CAP services and business logic
- ✓ Create an SAP Fiori-based user experience
- ✓ Configure required SAP BTP services
- ✓ Integrate an external or SAP business service
- ✓ Add generative AI functionality
- ✓ Implement AI-driven business interaction
- ✓ Configure application security
- ✓ Test and debug the complete solution
- ✓ Deploy the application to SAP BTP
- ✓ Validate the deployed solution
- ✓ Review architecture and implementation practices