Building an ERP Prototype with Open-Source Tools Training Course

Professional Development Training Course Outline

Category	Enterprise Resource Planning (ERP)	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's fast-paced business environment, Enterprise Resource Planning (ERP) systems are essential for integrating core business processes, improving efficiency, and driving data-driven decision-making. The need for customizable, cost-effective, and scalable ERP solutions has never been more urgent. Open-source ERP platforms offer businesses the flexibility to tailor systems to their specific needs without the hefty price tag associated with proprietary systems. Building an ERP Prototype with Open-Source Tools Training Course aims to empower participants with the knowledge and skills necessary to build a robust ERP prototype using open-source tools. By leveraging these tools, learners will gain practical, hands-on experience in designing, developing, and deploying a fully functional ERP prototype, ready for real-world implementation.

The course blends theoretical understanding with practical application, providing a deep dive into the architecture of ERP systems and the open-source technologies that power them. By the end of the training, participants will have the ability to develop and customize an ERP prototype, focusing on the modular components of ERP such as finance, inventory, HR, and customer relationship management (CRM). With a focus on trending open-source frameworks, tools, and methodologies, this course equips learners with the critical skills needed to address business challenges, integrate data seamlessly across functions, and create scalable, high-performance ERP systems.

Programme Curriculum

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10 days

Course Objectives

1. Understand the core principles of ERP systems and their role in modern businesses.
2. Learn about open-source ERP tools and their advantages over proprietary ERP solutions.
3. Develop proficiency in system architecture design for ERP applications using open-source frameworks.
4. Explore integration techniques for connecting different business modules (finance, HR, inventory, CRM) in an ERP system.
5. Gain hands-on experience in designing a customizable ERP prototype tailored to business requirements.
6. Master ERP customization to fit specific business workflows using open-source tools.
7. Implement data security protocols in ERP prototypes to ensure data privacy and compliance.
8. Enhance problem-solving skills by developing ERP systems that meet real-world business challenges.
9. Integrate cloud technologies for ERP systems deployment and scalability.
10. Use data analytics tools within ERP systems to provide actionable insights and improve business decisions.
11. Learn best practices in ERP testing and validation for ensuring system quality.
12. Develop deployment strategies for open-source ERP systems in production environments.
13. Understand project management methodologies for successful ERP system development and delivery.

Target Audience

1. Business Analysts.
2. IT Professionals.
3. Developers.
4. Project Managers.
5. Entrepreneurs.
6. ERP Consultants.
7. Data Scientists.
8. System Administrators.

Training Modules

Module 1: Introduction to ERP Systems

- Overview of ERP and its business benefits.
- Key components and modules of ERP systems.
- Types of ERP systems
- Challenges in ERP implementation.
- Case Study: ERP adoption in a mid-size manufacturing firm.

Module 2: Open-Source ERP Frameworks

- Introduction to popular open-source ERP tools
- Comparative analysis of open-source vs proprietary ERPs.
- Licensing models and community support.
- Key features of open-source ERP tools.
- Case Study: Transitioning from proprietary to open-source ERP in a logistics company.

Module 3: ERP System Architecture

- Understanding ERP architecture
- Designing scalable and modular ERP systems.
- Best practices for ERP system architecture.
- Integration of third-party tools with ERP systems.
- Case Study: ERP architecture design for a retail business.

Module 4: Database Design and Integration

- Relational databases vs. NoSQL for ERP systems.
- Designing the ERP database schema.
- Integrating data from multiple sources.
- Data normalization techniques.
- Case Study: Data integration challenges in a global supply chain ERP system.

Module 5: Customization and Configuration of ERP

- Customizing ERP modules
- Configuring workflows and user interfaces.
- Developing custom business logic in open-source ERP tools.
- Extending ERP functionalities through plugins and modules.
- Case Study: Customizing ERP for a healthcare provider.

Module 6: ERP Data Security and Compliance

- Implementing role-based access control.
- Securing sensitive business data in ERP systems.
- Compliance with GDPR, HIPAA, and other regulations.
- Data encryption and backup strategies.
- Case Study: Securing an ERP system for a financial institution.

Module 7: Business Process Automation in ERP

- Automating repetitive tasks using ERP workflows.
- ERP integration with external automation tools (RPA).

- Enhancing employee productivity through process automation.
- Real-time alerts and notifications in ERP systems.
- Case Study: Automating procurement processes with ERP.

Module 8: Cloud Integration and ERP Deployment

- Benefits of cloud-based ERP deployment.
- Cloud infrastructure for ERP systems.
- Steps to deploy ERP on cloud platforms.
- Integrating cloud services with on-premise ERP systems.
- Case Study: Cloud-based ERP deployment in a global e-commerce company.

Module 9: Data Analytics in ERP Systems

- Leveraging ERP data for advanced analytics.
- Building data dashboards and visualizations.
- Predictive analytics in ERP systems.
- Data-driven decision-making and reporting.
- Case Study: Using ERP data to improve sales forecasting.

Module 10: ERP Testing and Quality Assurance

- Types of testing for ERP systems
- Best practices in ERP system testing.
- Automated testing tools for ERP.
- Managing ERP test environments.
- Case Study: Testing and validation in an ERP rollout for a non-profit organization.

Module 11: ERP Implementation Methodologies

- Waterfall vs. Agile for ERP implementation.
- ERP project management best practices.
- Phases of ERP implementation
- Managing change during ERP implementation.
- Case Study: ERP implementation in a multinational corporation.

Module 12: User Training and Support

- Training end-users on ERP systems.
- Creating user manuals and documentation.
- ERP user support strategies.
- Handling post-implementation issues.
- Case Study: ERP user training for a logistics company.

Module 13: ERP Maintenance and Updates

- Strategies for maintaining ERP systems.
- Rolling out ERP updates and patches.
- Managing ERP system upgrades.
- Post-deployment support and troubleshooting.
- Case Study: Ongoing ERP maintenance at a growing retail company.

Module 14: Project Management for ERP Development

- Defining project scope and timelines for ERP systems.
- Risk management and mitigation strategies in ERP projects.
- Budgeting for ERP system development and deployment.
- Collaboration and communication in ERP projects.
- Case Study: Managing an ERP implementation project in a government agency.

Module 15: Future Trends in ERP Development

- The role of AI and machine learning in ERP systems.
- ERP integration with IoT and blockchain.
- Advancements in mobile ERP solutions.
- The shift towards microservices-based ERP architecture.
- Case Study: Future-proofing ERP systems for digital transformation.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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