

Overview

SecureBank Lab is a modular financial infrastructure simulation framework designed for academic institutions, blockchain engineering programs, and research environments.

The system provides a controlled environment for studying digital asset custody models, transaction flows, event-driven accounting structures, and blockchain-based financial architecture.

SecureBank Lab enables institutions to explore how modern digital financial infrastructure is designed, deployed, and analyzed within blockchain ecosystems.

Core Components

- Custodial smart contract architecture
- Event-driven transaction logging system
- Internal ledger simulation layer
- Multi-asset compatibility (ETH and ERC-20 tokens)
- Structured accounting export (CSV and JSON formats)
- Deployment and interaction scripts for controlled environments
- Technical documentation for institutional deployment

Architecture Model

SecureBank Lab follows a hybrid architecture model combining on-chain execution with structured off-chain logging.

On-Chain Custody

Smart contract execution and transaction validation.

Event Emission

Blockchain events generated by contract activity.

Off-Chain Logging

Listener scripts capture and structure transaction data.

Accounting Export

Periodic export of transaction logs for financial analysis and academic demonstration.

Educational Applications

SecureBank Lab enables academic programs to demonstrate:

- Custodial banking infrastructure design
- Blockchain event architecture
- Transaction auditing models
- Digital asset accounting workflows
- Smart contract interaction patterns
- Hybrid on-chain / off-chain financial systems

Intended Use

SecureBank Lab is designed exclusively for educational, research, and simulation environments.

The system is not intended for production banking deployment or real financial custody operations.

Institutional Access

SecureBank Lab is distributed through institutional licensing agreements.

Access requests are evaluated individually to ensure appropriate academic deployment.

Contact

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