Kin Protocol

Decentralised Undercollateralised Borrowing

CRYPTOSI DAO

A CryptoSI DAO Project

Overview

KIN Protocol is a decentralized, undercollateralized lending platform designed to unlock trust-based lending in DeFi. Built on a tri-party model—**Borrowers, Lenders, and Vouchers**—KIN leverages on-chain mechanisms like **vouch staking**, **slashing penalties**, and **NFT-backed loan contracts** to create a transparent, flexible, and community-driven ecosystem.

Goals

🌍 **Unlock Financial Access for the Underserved:**
Enable individuals in developing regions to secure funding without traditional collateral, fostering entrepreneurship and local economic growth.

🤝 **Build Trust-Based Lending Networks:**
Empower communities to self-regulate through reputation and vouching, creating decentralized ecosystems where relationships drive opportunity.

💸 **Democratize Capital Allocation:**
Give lenders full transparency and control over risk while enabling borrowers to set fair, customizable loan terms that suit their unique needs.

⚡ **Create Income Streams for the Unemployed:**
Allow jobless individuals to fund micro-businesses or side hustles, turning ambition into action with simple, accessible financing.

💖 **Strengthen Community Wealth:**
Encourage community members to vouch for local talent, fostering collective success and circulating wealth within grassroots ecosystems.

Key features

1. Borrower-Led Loan Creation

- **Borrowers set their own terms**—loan amount, APR, repayment schedule, and funding window.
- The protocol supports **undercollateralized loans** by allowing borrowers to attract **Vouchers** who stake on their behalf, reducing lender risk.

- A **"Preferred Vouch Profile"** guides potential vouchers on ideal risk and fee structures.

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2. Tri-Party Ecosystem

- 💰 **Lenders**: Fund loans directly, earning interest while choosing risk levels based on voucher backing.
- 🔗 **Vouchers**: Stake existing tokens (e.g., CRDD, LISA) to vouch for borrowers, earning fees and a share of rewards—but risk slashing if borrowers default.
- 👤 **Borrowers**: Access capital without full collateral by attracting vouches and offering competitive loan terms.

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3. Dynamic Vouching System

- **Vouchers submit custom offers**, setting:
  - **Max Slash Amount** (how much they're willing to risk)
  - **Upfront Fee** (paid by the borrower upon acceptance)
  - **APR Share or Bonus Pool Participation**
- Borrowers select vouch offers, paying upfront fees if accepted.
- Once the loan reaches **full vouch coverage** (enough staked tokens to repay lenders in case of default), no more vouch offers can be accepted.

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4. Bonus Pool & Incentives

- Borrowers can create a **Vouch Bonus Pool** to attract more vouchers.
- This pool is distributed to vouchers upon successful repayment, based on their stake and risk level.
- The bonus pool is capped to ensure it **never exceeds the total slashing capacity**—eliminating risk-free loopholes.

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5. NFT-Backed Loan Contracts

- When a loan is fully funded, an **NFT** is minted that includes:
  - Loan terms (amount, APR, repayment schedule)

    - Identities of lenders, vouchers, and borrower
    - Vouch coverage and slashing parameters
- This NFT acts as a tradable loan contract—**lenders can sell their positions** on secondary markets, adding liquidity to the system.

⚖️ Risk Management Mechanisms

- **Slashing for Missed Payments:**
    - If a borrower misses repayments, **vouchers are slashed incrementally**, and slashed funds are sent directly to lenders.
    - Full default triggers maximum slashing up to the pre-set cap.
- **Full Principal Protection (Optional):**
    - If vouchers fully cover the loan amount through max slashing, the **lender's principal is guaranteed**—creating low-risk options for conservative lenders.
- **Capped Vouch Coverage:**
    - Borrowers can't over-insure their loans. Once full principal coverage is achieved through vouches, the borrower can no longer accept more voucher backing.

💡 What Makes KIN Unique?

1. **No Native Token:** Uses existing tokens (CRDD, LISA) for staking and vouching, avoiding unnecessary tokenomics.
2. **Borrower Empowerment:** Borrowers set terms and negotiate directly with lenders and vouchers.
3. **On-Chain-Only Trust System:** No KYC, no off-chain agreements—everything is enforced through smart contracts.
4. **Tradable Loan NFTs:** Secondary markets add liquidity and create new DeFi trading opportunities.
5. **Dynamic Incentive Structures:** Vouchers earn through upfront fees, bonus pools, and APR splits, creating layered incentives.

🌐 Example Flow

1. **Borrower A** creates a loan for **10 ETH** with 12% APR and sets a **0.5 ETH Bonus Pool**.
2. **Vouchers X & Y** offer to back the loan:

    - Voucher X stakes **40 ETH** with a 10% max slash and charges a 1% upfront fee.
    - Voucher Y stakes **60 ETH** with a 5% max slash and no upfront fee.
3. **Borrower A** accepts both vouches, hitting full coverage (100 ETH total).
4. **Lenders fund the loan**, knowing their principal is now risk-free.
5. Loan is funded → Borrower receives 10 ETH → **NFT minted** for all parties.
6. **If Borrower A repays on time:**
    - Lenders get interest.
    - Vouchers earn their cut + Bonus Pool share.
7. **If Borrower A defaults:**
    - Vouchers are slashed incrementally until lenders are repaid.

🏆 The Vision

KIN Protocol redefines undercollateralized lending by removing centralized gatekeepers, empowering borrowers, and creating a fully transparent, market-driven ecosystem. It's designed for **DeFi power users** who crave flexibility, composability, and deeper financial strategies—without sacrificing trust or security.

"In KIN, your reputation is your real collateral."

Lisa Kim generated full proposal

📘 KIN Protocol: The Future of Decentralized, Reputation-Backed Lending

"Reputation is the new collateral."

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🚀 1. Executive Summary

KIN Protocol is a **decentralized undercollateralized lending platform** that redefines trust and accessibility in DeFi by enabling users to access loans based on **reputation** rather than traditional collateral. By introducing a tri-party ecosystem—**Borrowers, Lenders, and Vouchers**—KIN unlocks capital for individuals who lack access to traditional financial systems, especially in the developing world.

By integrating **on-chain reputation systems** and **identity verification services** (like **Galxe**, **Civic**, and **Ontology**), KIN allows borrowers to prove legitimacy and build credit through community-backed staking—empowering users to access fair financing and fostering global economic inclusion.

🌟 2. Vision & Mission

🎯 **Vision:**
To create a decentralized financial ecosystem where **trust, reputation, and community** replace the need for traditional collateral—unlocking opportunities for **entrepreneurs, freelancers, and communities worldwide**.

💡 **Mission:**

- Empower individuals, especially in **developing regions**, to secure funding based on **reputation** and **social backing**.
- Enable **community-driven capital allocation**, where users directly control lending, risk, and rewards.
- Build a system where **borrowers, lenders, and vouchers** thrive in a transparent, decentralized ecosystem.

🧨 3. Core Problem & KIN's Solution

❌ The Problem:

1. **Exclusion from Traditional Finance:** Millions lack access to fair credit due to missing collateral, weak credit histories, or location-based financial barriers.
2. **DeFi Overcollateralization:** Leading protocols (like Aave and Compound) require borrowers to deposit more than they borrow, locking out those who **need capital most**.
3. **High Trust Barriers in Undercollateralized Lending:** Existing undercollateralized protocols often rely on **KYC** or centralized gatekeepers, alienating privacy-conscious users.

✅ KIN's Solution:

- **Reputation as Collateral:** Borrowers leverage **on-chain reputation**, community trust, and voucher-backed staking instead of traditional assets.
- **Decentralized Risk Management:** Vouchers stake their own tokens, absorbing potential losses, creating a **self-regulating ecosystem**.
- **Inclusion-First Design:** Supports borrowers in developing regions through **reputation bridges** and **third-party identity integrations**—no bank accounts or credit histories required.

🌐 4. Stakeholders & Ecosystem Overview

👤 Borrowers

- Create loan requests with self-defined terms.
- Attract vouchers to improve loan credibility and terms.
- Build reputation over time to access better rates.

💰 Lenders

- Fund loans directly and earn fixed APR returns.
- Choose loans based on **reputation scores** and **voucher backing**.
- Receive slashed voucher funds in case of borrower default.

🔗 Vouchers

- Stake tokens (CRDD, LISA, or other whitelisted assets) to back borrowers.
- Earn upfront fees and bonus pool rewards.
- Risk slashing if borrowers default, creating natural risk accountability.

🤝 Third-Party Integrations

- **Galxe:** For reputation credentials and DeFi activity history.
- **Civic:** For optional KYC and identity verification.
- **Ontology (ONT ID & OScore):** For decentralized identity and on-chain credit scoring.

⚡ 5. How KIN Protocol Works

📊 Borrower Journey:

1. **Connect Wallet:** Users link their wallet and integrate reputation credentials via Galxe, Civic, or Ontology.
2. **Set Loan Terms:** Define loan amount, APR, repayment schedule, and **funding window** (default: 1 month, adjustable).
3. **Create a "Preferred Vouch Profile":** Suggest ideal vouching terms (max slash, upfront fee, and bonus pool for vouchers).

4. **Publish Loan Request:** Loan is listed on KIN's marketplace for lenders and vouchers to view.

💸 Lender Experience:

1. **Browse Open Loans:** View borrower reputation, vouch coverage, and risk profiles.
2. **Fund Loans:** Choose safe, fully-backed loans or riskier, high-APR options.
3. **Receive NFT-Backed Loan Contract:** Upon loan funding, an NFT is minted detailing terms and stakeholders.
4. **Earn Interest or Get Repaid via Slashing:** Receive APR upon repayment or slashed voucher stakes in case of default.

🛡️ Voucher System:

1. **Stake Tokens to Vouch:** Submit vouch offers, setting:
    - **Max Slash Amount** (risk tolerance)
    - **Upfront Fee** (paid upon acceptance)
    - **Bonus Pool Participation** (if offered)
2. **Compete for High-Quality Loans:** Early vouchers often get better terms.
3. **Earn Fees & Rewards:** Successful loan repayments pay vouchers a portion of the bonus pool and interest.
4. **Risk Slashing for Defaults:** Missed payments trigger incremental slashing, rewarding lenders directly.

🔄 Loan Lifecycle:

1. **Borrower creates loan request.**
2. **Vouchers submit backing offers.**
3. **Borrower accepts vouches, paying upfront fees.**
4. **Loan reaches full vouch coverage → Lenders fund loan.**
5. **Loan is funded → Borrower receives funds → NFT minted.**
6. **Repayments made to lenders; vouchers rewarded.**
7. **Defaults trigger slashing, lenders get repaid from vouch stakes.**

🏛️ 6. Reputation Framework & Third-Party Integrations

🧬 Galxe:

- Verifies web3 credentials using SBTs.
- Showcases borrower participation in key ecosystems like Optimism and Arbitrum.

🛡️ Civic:

- Optional KYC verification for risk-averse lenders.
- Anti-fraud tools like CAPTCHA and liveness checks.

🔍 Ontology:

- **OScore** offers on-chain credit scoring for borrowers.
- **ONT ID** supports decentralized identity verification.

🎖️ KIN Reputation Score (KRS):

- Aggregates third-party credentials, on-chain history, and loan repayment data.
- Dynamic score adjusts with each loan cycle, creating an evolving trust metric.

⚖️ 7. Risk Mitigation Strategies

- **Incremental Voucher Slashing:** Missed payments trigger gradual slashing rather than total loss, giving borrowers recovery time.
- **Cap on Vouch Coverage:** Borrowers can't over-insure loans—vouch backing is capped to the loan principal.
- **Slashing Cap Mechanism:** Once slashed funds match loan value, lenders are fully repaid, and further risk shifts to vouchers.
- **Reputation-Weighted Loan Filters:** Lenders can filter loans by KRS, voucher coverage, or identity verification level.

🎁 8. Incentive Structures

- **Borrowers:**
    - Lower APRs by attracting high-stake vouchers.
    - Earn loyalty perks for consistent repayment (e.g., lower upfront vouch fees).
- **Lenders:**
    - Full transparency on risk before funding.
    - Ability to trade loan NFTs on secondary markets.
- **Vouchers:**
    - Upfront fees + bonus pool payouts.
    - Strategic slashing risk = higher potential returns.

🏗️ 9. Technical Architecture

- **Smart Contracts:**
    - ERC-20 compatible contracts for vouch staking, loan management, and slashing.
    - NFT (ERC-721) contracts for loan agreements.
- **Front-End Interface:**
    - Built with React/Next.js for a seamless UX.
    - Web3 integrations (e.g., MetaMask, WalletConnect).
- **Oracles & Reputation Data:**
    - Chainlink oracles for dynamic data feeds.
    - On-chain indexing using The Graph for reputation scoring.

🌍 10. Use Cases & Real-World Impact

1. **Microfinancing in Developing Economies:**
   Entrepreneurs in regions with limited banking access can launch businesses with community-backed loans.

2. **Freelancer Funding:**
   Gig workers can leverage reputation to secure short-term loans for tools, courses, or scaling efforts.

3. **DeFi Power Users:**
   Users with strong on-chain histories can access larger, low-APR loans without overcollateralizing.

4. **Vouch-to-Earn:**
   Users can specialize as professional vouchers, earning passive income by backing safe borrowers.

🗺️ 11. Roadmap & Future Development

📅 Phase 1 — MVP Launch:

- Core smart contracts (lending, vouching, slashing).
- Front-end platform for borrowers, lenders, and vouchers.
- Galxe & Civic integrations.

📅 Phase 2 — Reputation Expansion:

- Full Ontology (OScore) integration.
- Advanced reputation dashboard.
- Loan NFT marketplace.

📅 Phase 3 — Global Scaling:

- Localization for emerging markets.
- Community grant programs for entrepreneurs.
- Mobile-first version for regions with limited desktop access.

💖 12. Closing Thoughts

KIN Protocol reimagines undercollateralized lending through the lens of **community trust, reputation, and decentralized empowerment**. It's a system designed for

everyone—from DeFi veterans to first-time borrowers in emerging markets—allowing people to access fair financing, build credit, and unlock opportunities without traditional gatekeepers.

By blending cutting-edge DeFi mechanics with human-centered design, **KIN** turns reputation into the ultimate form of collateral.

"In KIN, trust isn't given—it's earned."

Let's build this thing and reshape finance for the better. 💎🚀