Creating Blockchain Protocols

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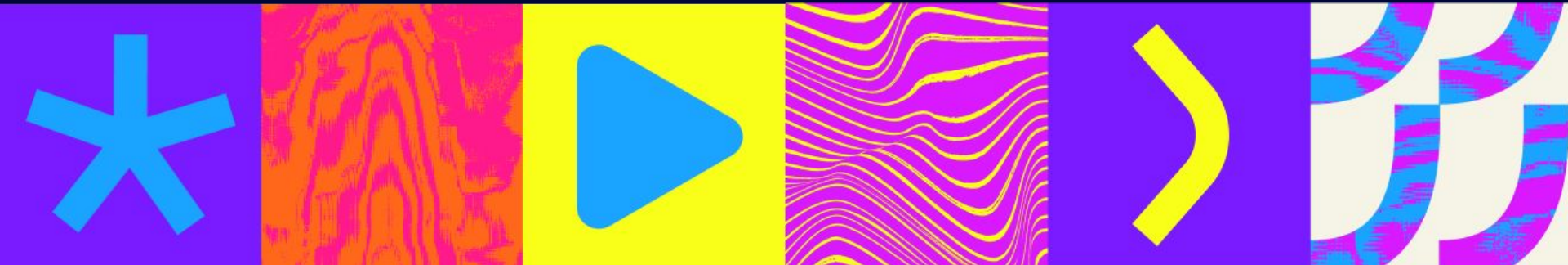
How to build

Blockchain Protocols

A **framework** for building **blockchain protocols**

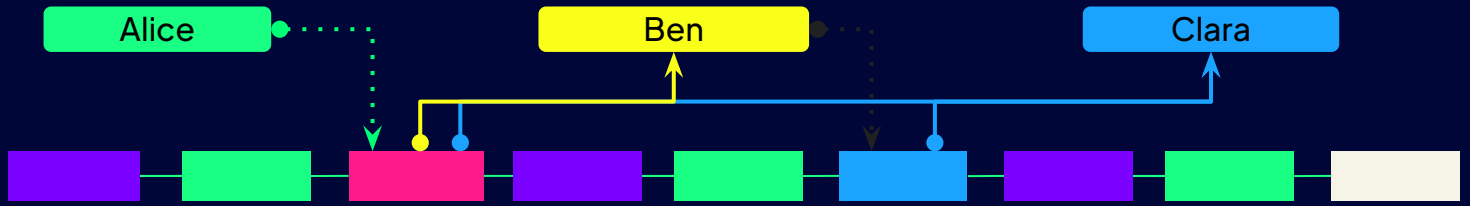


A Simple Framework for Blockchain Projects

Blockchains are **shared databases**

They aren't just platforms for apps — they're coordinated infrastructure that enable open participation across actors.

To build meaningful blockchain systems, think in three layers.



1. Define the protocol

Start with rules, not code.

Define the core concepts:

- What are the entities? (accounts, assets, identities)
- What are the actions? (transfer, escrow, governance, delegation)

Abstract away from tech — design what should happen, not how it's implemented.

- Think like a game designer: define the rules everyone will play by.

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2. Specify the On-Chain Representation

Translate the protocol into a public blockchain spec.

- What gets written to the ledger?
- Which XRPL transaction types will be used?
- What metadata is stored? What needs to be indexable?
- Prioritize clarity and interoperability — others should be able to implement against it.

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3. Implement the Applications

Translate the protocol into a public blockchain spec.

- Create frontends, agents, bots, wallets, or services that follow the spec.
- Anyone should be able to build a compatible client.
- Shared protocols = multiple clients = real ecosystems.

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Why This Matters

Protocols > Apps

- Apps come and go. Protocols can outlast companies.
- Ecosystem effects emerge when others build around a clear, open spec.
- Designing like this means you're building coordination systems, not just tools.

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Mini Workshop
Create a Blockchain Protocol

Activity

15 minutes

Step 1 — Choose a Use Case (2 min)

Pick a scenario where multiple users need to coordinate.
Ex: identity verification, NFTs, token-based memberships, project funding, etc.

Step 2 — Design the Protocol (5 min)

What are the core objects? What actions/interactions are possible? What must be tracked or enforced for it to work?

Step 3 — Map to Blockchain (5 min)

What data goes on-chain? What XRPL features would you use? What metadata or IDs are important? What needs to be indexed or queried off-chain?

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