Protocol POC Requirements

1. Collateral Deposit (LSTs):

The protocol shall allow users to deposit low-volatility, yield-bearing assets such as mSOL, jitoSOL, and wSOL as collateral.

2. Stablecoin Minting (USDX):

The protocol shall allow users to mint a USD-pegged stablecoin (USDX) against their deposited collateral, based on a configurable Loan-to-Value (LTV) ratio.

3. Collateral Whitelisting:

The protocol shall maintain a whitelist of eligible collateral tokens. Only whitelisted tokens such as mSOL, jitoSOL, and wSOL can be deposited.

4. User-Guided Collateral Deployment:

The protocol shall allow users to manually deploy their deposited collateral into approved DeFi strategies (e.g., staking, lending, LPing).
Users retain full control over strategy selection and execution

5. Collateral & Strategy Tracking:

The protocol shall maintain a real-time view of each user's:

- Deposited collateral,
- Outstanding debt (USDX minted),
- Collateral deployment destinations (whitelisted protocols only),
- Position health (based on LTV and oracle prices).

6. Oracle Integration:

The protocol shall integrate with decentralized oracles (e.g., Pyth) to fetch real-time price feeds for each whitelisted collateral type.
These oracles shall be used to calculate LTV and determine solvency thresholds.

7. Liquidation Mechanism:

The protocol shall allow third-party liquidators to repay a portion of an undercollateralized user's debt and receive a corresponding share of the user's collateral at a discount.
Liquidation shall occur when the user's LTV exceeds the safe threshold.

8. Stablecoin Redemption:

The protocol shall allow users to burn USDX in exchange for reclaiming their deposited collateral, provided the LTV ratio permits withdrawal.
The redeemed collateral shall remain in its previously deployed state unless the user unstakes or withdraws it manually.

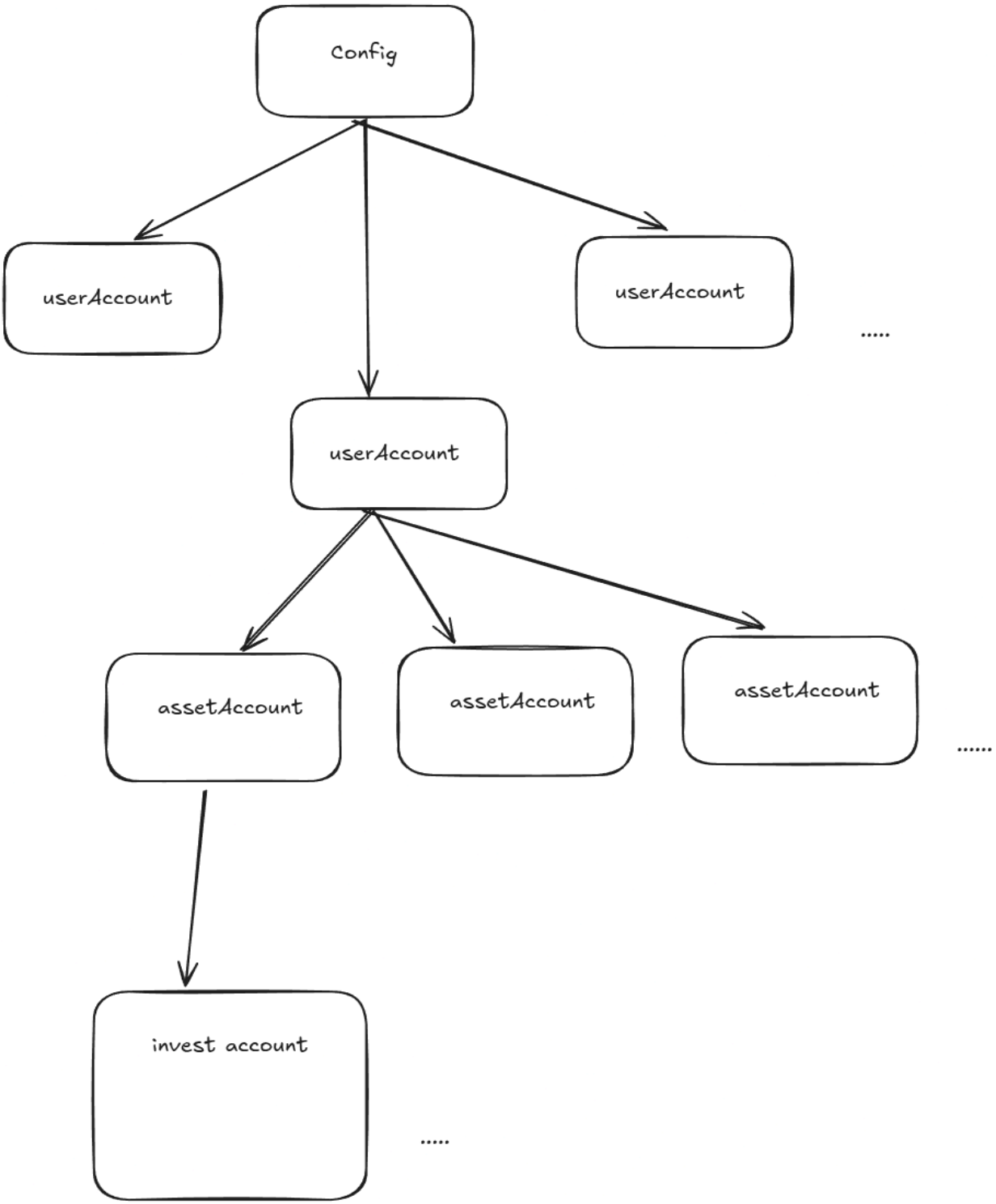
9. Yield Accrual Visibility (User-Owned):

The protocol shall track the yield generated from each user's deployed collateral, even though deployment is user-initiated.
The yield shall accrue to the user or strategy vault directly; the protocol does not claim this yield unless otherwise specified.

10. Fee Vault & Protocol Revenue:

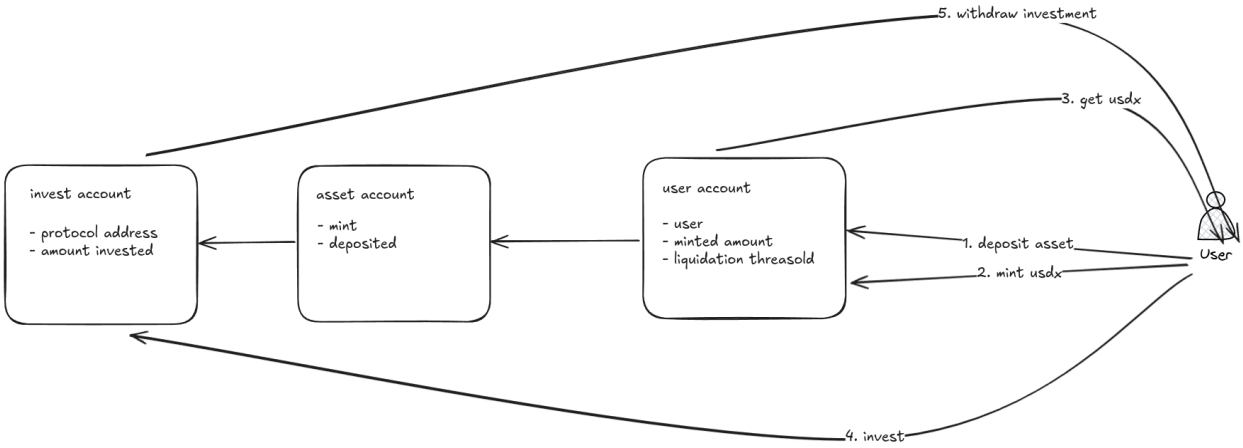
The protocol shall collect fees (e.g., minting/origination fees, liquidation penalties) and route them to a designated protocol-controlled vault.
These fees may be governed by DAO proposals in future versions.

High level of accounts



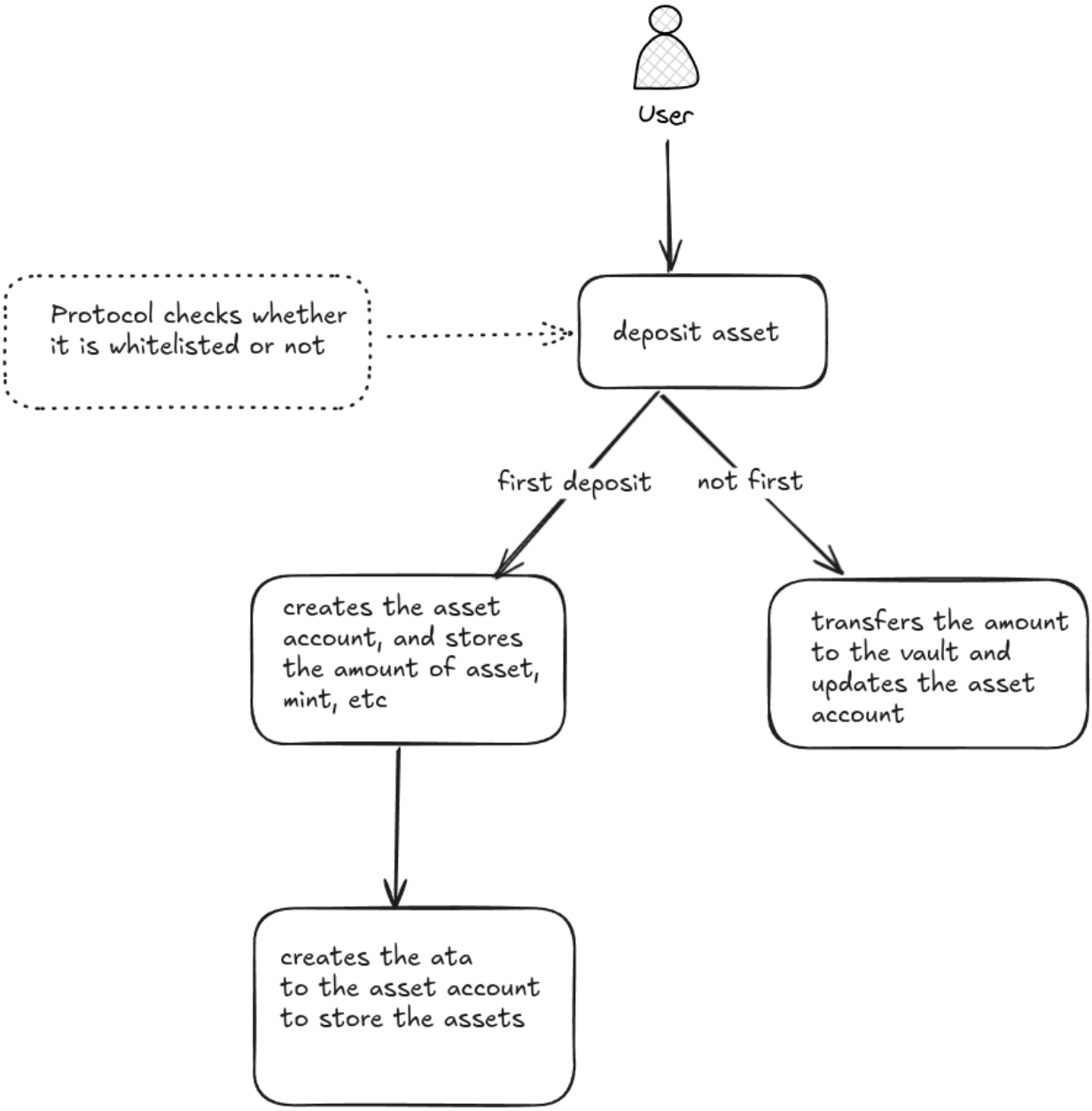
Config account stores the important config required for the protocols like the allowed protocols, fee, mint, etc
User account stores the amount minted, liquidation threshold, etc
Asset account stores the information related to the token deposited to mint
Each asset has the invest account which stores the information like investment on different protocols.

Overview



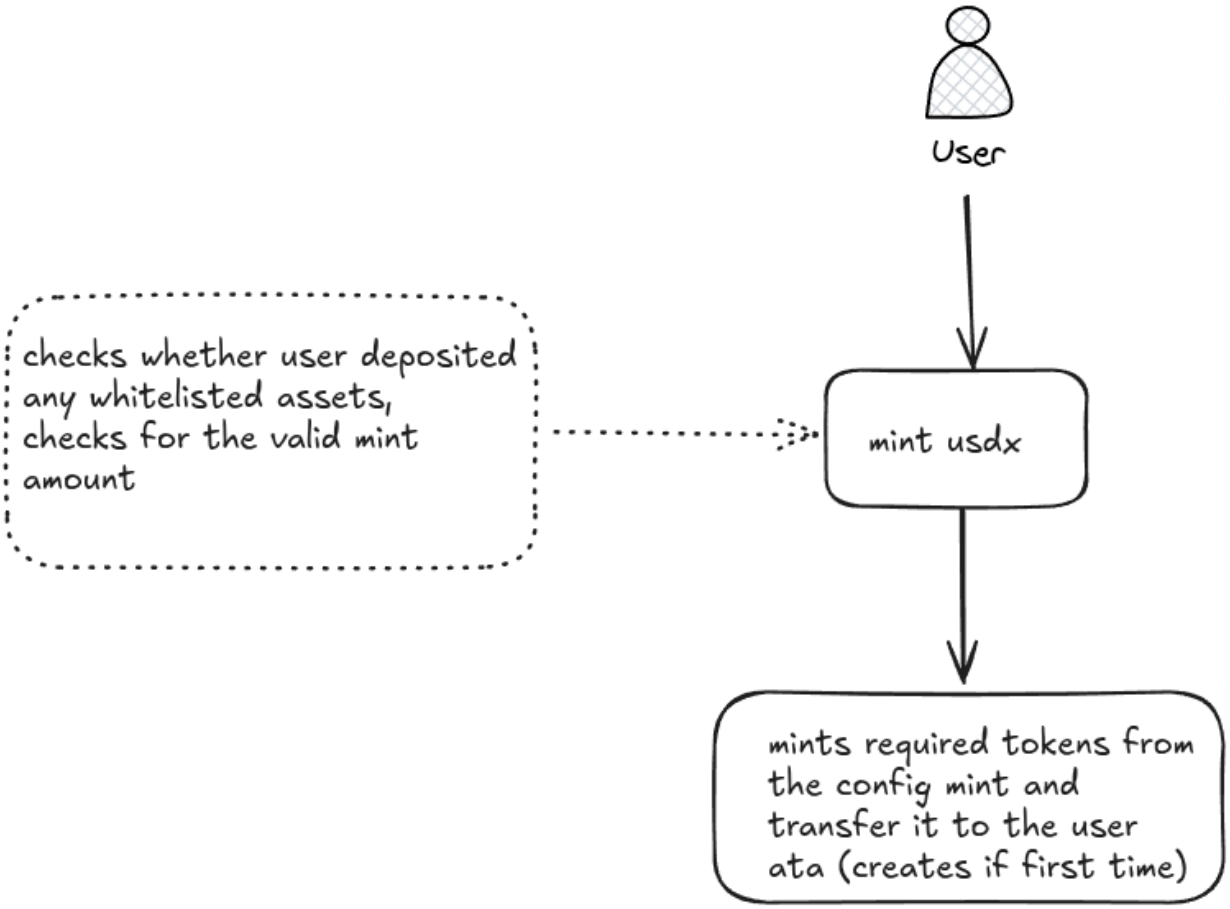
1. Deposit asset
    - An asset account is created and details of the asset like mint, amount gets stored
2. Mint usdx
    - User can mint the usdx based on the collateral deposited, this includes values of all the asset amount deposited
3. Withdraw
    - User can withdraw the required asset by burning the minted usdx
    - The asset account gets deleted if all the amount are withdrawn
4. invest
    - The deposited assets can be invested in whitelisted protocols
    - The collateral which is used for the minting of usdx can also be used for investments
5. Withdraw investment
    - Users can get back the invested assets and claim the further rewards

1.Deposit asset



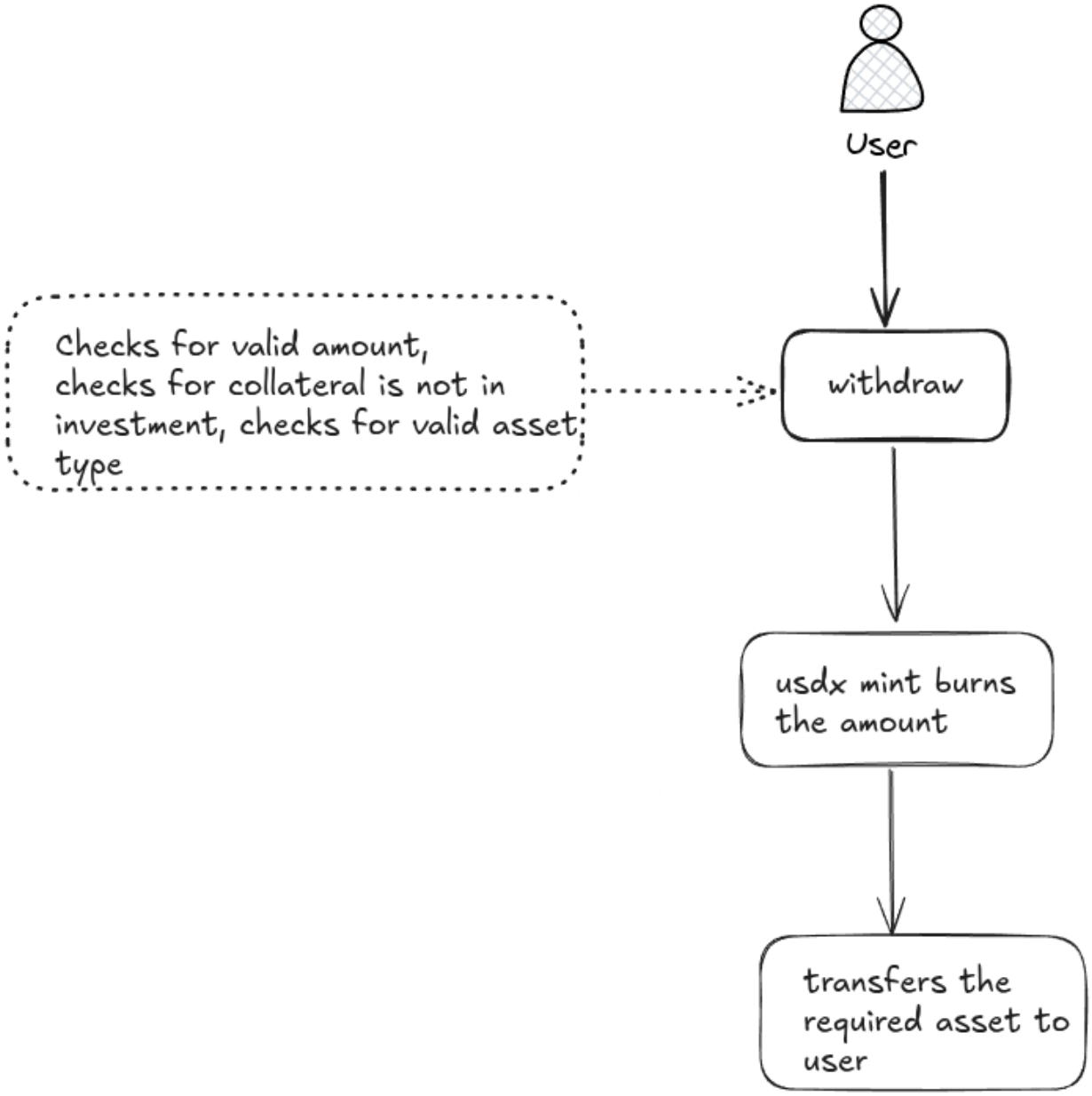
1. User can only deposit the whitelisted assets
2. Creates the asset account, if already exists it add to the vault

2. Mint usdx



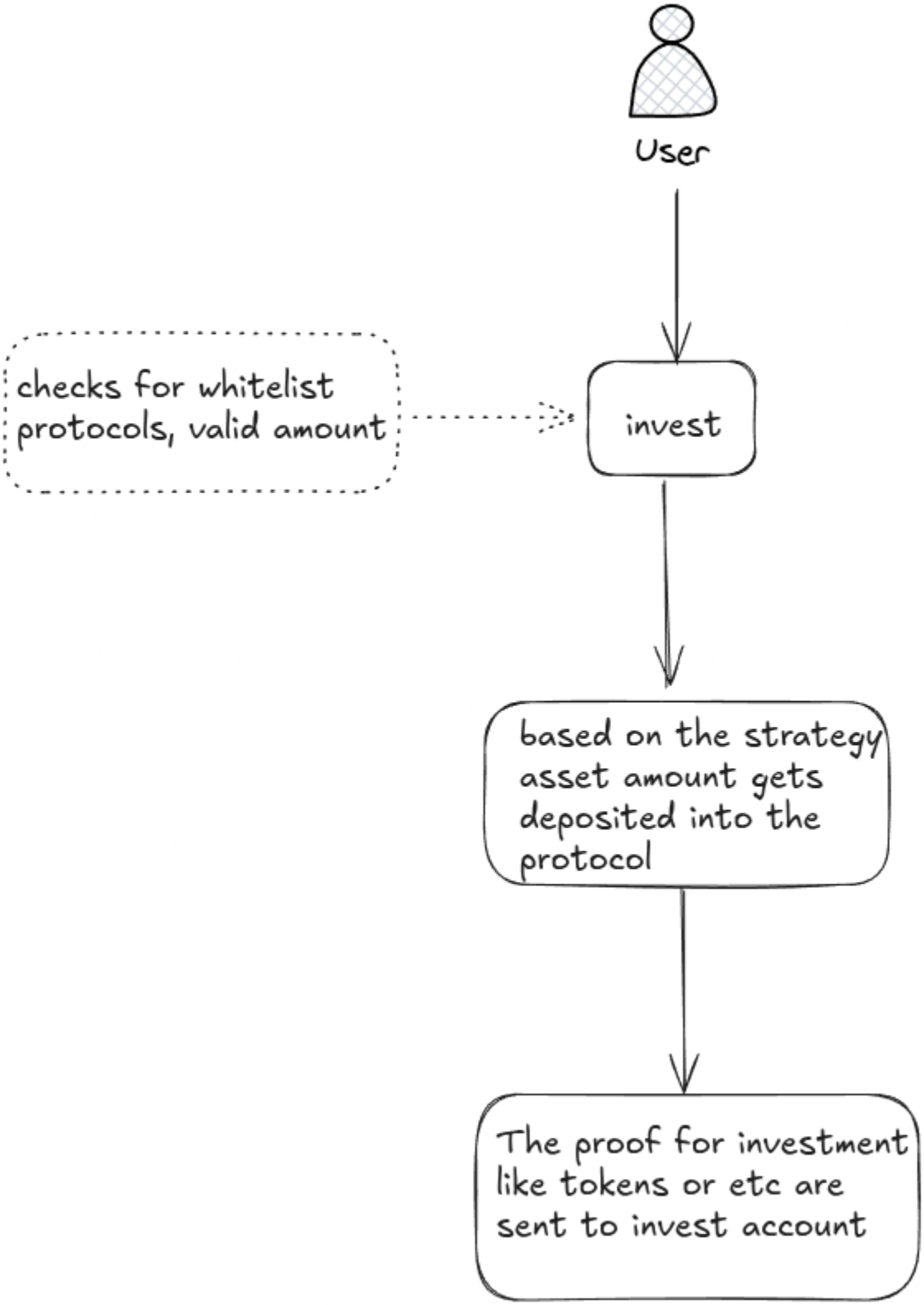
1. Users are only allowed if they have required collateral to mint usdx
2. Usdx mint transfers tokens to the user ata

3. Withdraw



1. User has to specify the type of asset to get in return of usdx, checks for valid amount, and the required asset amount is not in the investment
2. Transfers the asset to the user and burn the usdx

4. Invest


User
checks for whitelist protocols, valid amount
invest
based on the strategy asset amount gets deposited into the protocol
The proof for investment like tokens or etc are sent to invest account

5. Withdraw investment