Business Document: Currency Management

1. Short Summary

The Global Currency Registry is a backend system that maintains an authoritative list of all recognized currencies in the world (e.g., USD, EUR, HKD) with their metadata (ISO codes, symbols, and country associations). This system ensures the bank's platform always references valid, up-to-date currencies for financial operations.

2. Action

- Data Collection: Gather official currency codes (ISO 4217, international organization for standardization) and metadata from trusted sources.

- Database Storage: Store currency details (code, name, short name, country, symbol, link of the country flag) into a database.

- API Exposure: Provide APIs for listing and updating currencies from time to time.

- Maintenance Mechanism: Allow admins to add/disable currencies as needed.

3. Outcome

- A comprehensive database of truth for all global currencies used in the bank's systems including some details like code, name, short name, country, link of the country flag.

- APIs for other services to fetch valid currencies and update / delete from time to time.

4. Definition of Done

- All ISO 4217 currencies with details are stored in the database.

- The currencies can be updated with API from time to time.

- APIs are live, documented, and secured.

- Integration tests confirm correct currency listings.

Solution Design: Currency Registry Backend

1. Database

- MySQL (structured, ACID-compliant).

- Table Structure:

```sql
CREATE TABLE currencies (
  id SERIAL PRIMARY KEY,
  iso_code CHAR(3) UNIQUE,   -- e.g., 'USD', 'HKD'
  name VARCHAR(100),         -- 'United States Dollar'
  symbol VARCHAR(5),         -- '$', '¥', '€'
  country VARCHAR(100),      -- 'United States', 'Hong Kong'
  is_active BOOLEAN DEFAULT TRUE
);
```

2. API

- GET /currencies → List all active currencies.

- GET /currencies ?=(iso_code/id/name/symbol/country/is_activate) → Fetch details of one currency by any fields.

- POST /currencies → Add a new currency.

- GET /currencies/delete → Disable a currency.

- POST /currencies/update → update some fields of a currency record.

3. Data Source

- Initial Data Load:

  - ISO 4217 Official List (https://www.iso.org/iso-4217-currency-codes.html).

  - Manual CSV Import for symbols/countries (since ISO doesn't provide symbols).