

Free TON Wallet

Originally, **Free TON Wallet** project was started by #137 Contest - Free TON Web Browser Extension.

Along research phase our team made decision to develop a cross platform application to archive best user experience, due most of people around the World use several platforms same time.

Right now we take a focus to fulfill Chrome Extension and Web-based versions with all necessary features. Build for Mobile and Desktop versions we plans to configure after code freeze.

Find us

- Website - <http://freeton-wallet.org/>
- Telegram Channel
- Google Group
- GitHub

Installation

Binary Releases of the wallet application available in our GitHub repostiry <https://github.com/freeton-wallet/wallet/releases>.

There are good reason to verify signature:

```
gpg --verify freeton-wallet-chrome-extenstion.zip.asc
```

To install Chrome Extention from ZIP binary archive follow this manual.

Publishing an extension to the extension stores is planned for near future.

References

- #137 Contest Free TON wallet as a Chrome extension. PDF: Stage 1 (a local copy).

Browser Extension

Chrome

1. Download desired version of binaries `freeton-wallet-chrome-extension.zip` and corresponding signature `freeton-wallet-chrome-extension.zip.asc` from <https://github.com/freeton-wallet/wallet/releases>
2. Verify signature, to prevent malware injection

```
gpg --verify freeton-wallet-chrome-extension.zip.asc
```

3. Switch your Chrome Extensions into `Developer mode`. See for official documentation for details.
 - a. Navigate to `chrome://extensions`
 - b. Turn ON development mode toggle.
4. Use button `Load unpacked` to upload ZIP binaries
5. Use Free TON Wallet extension

Firefox

TBD

Safari

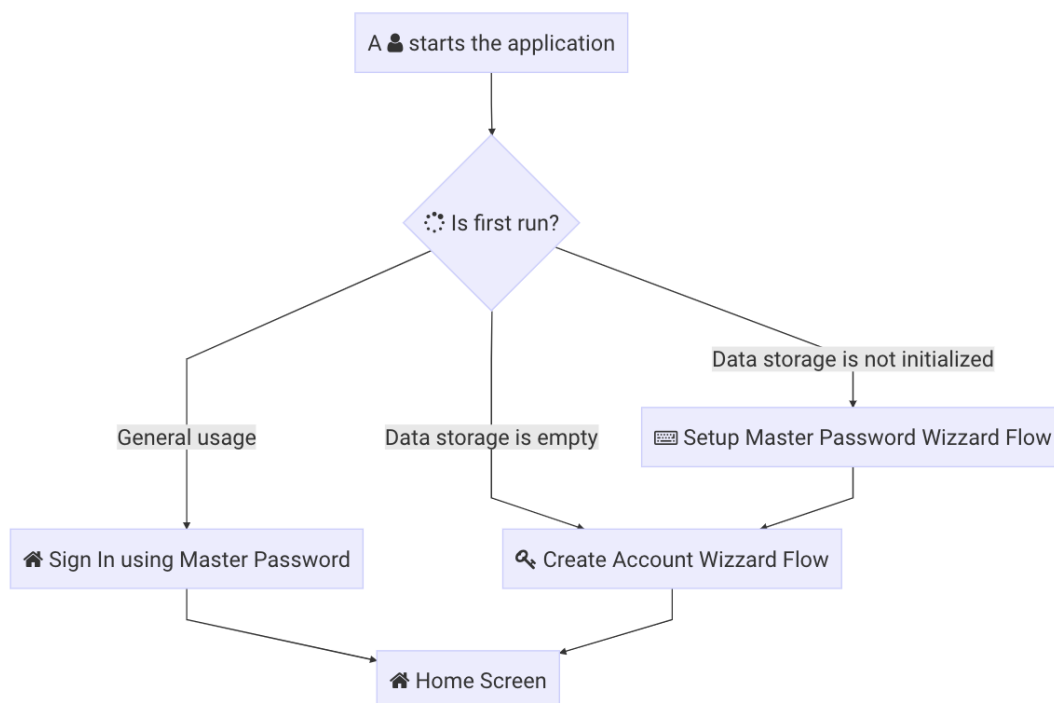
TBD

Use Cases

Launch the application

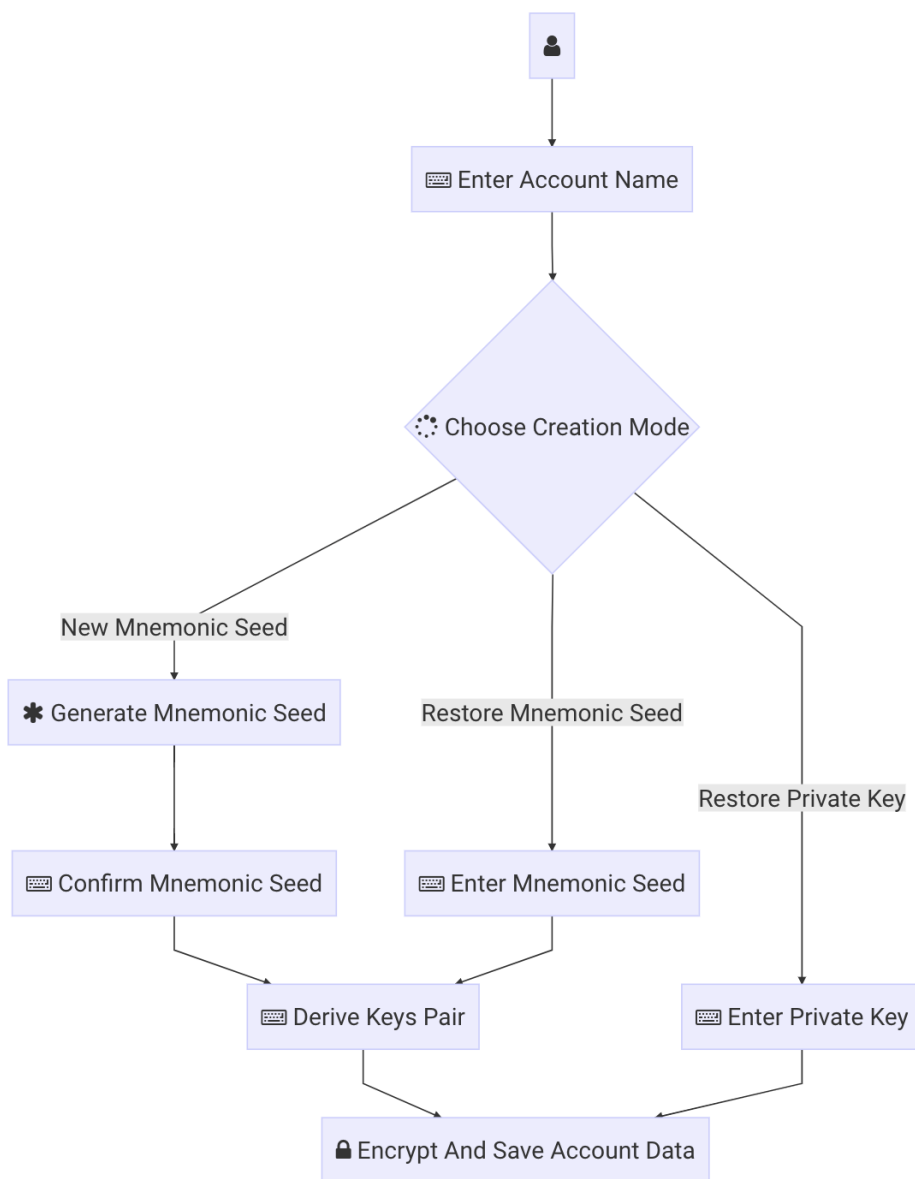
At launch time the application check data storage and detect necessity of wizzard flow.

For example, at first launch, the application make wizzard for Master Password and create a first account.



Use Cases

Create Account Wizzard



Use Cases

Deploy Wallet Contract

A new account is required a Wallet Contract to be deployed. So after account creation, a user have to deploy one of contract.

TBD

Technical Stack

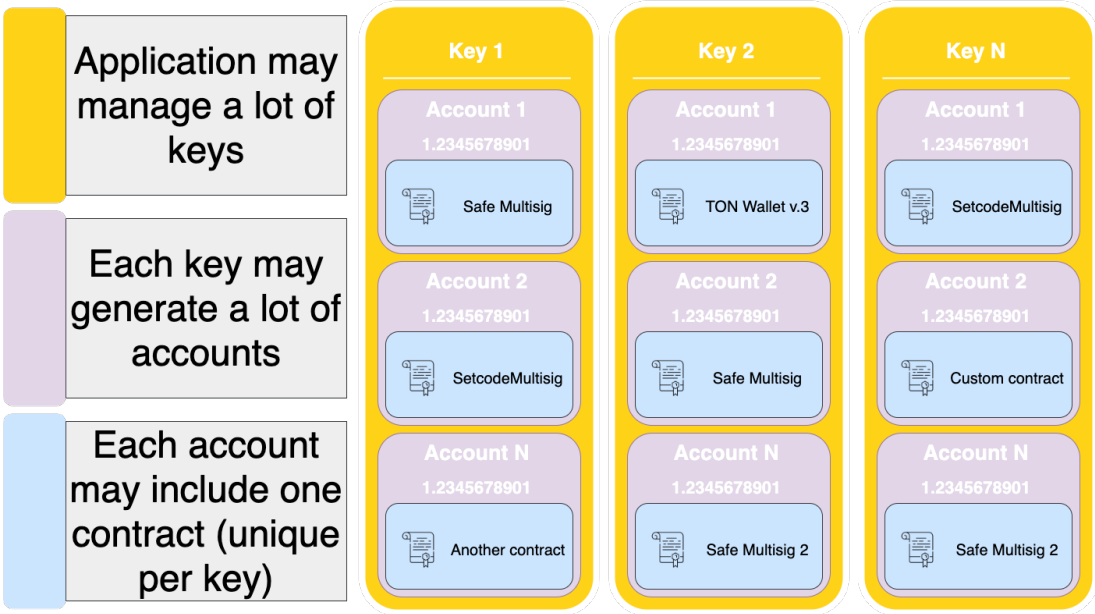
- Wallet Application is written in Flutter/Dart
 - Web platform:
 - Free TON Blockchain communication via official TON Javascript Web SDK with own interop facade library
 - Data Storage in browser `LocalStorage`
 - Sensitive data encryption via AES-CBC (with PKCS7 padding)
 - Password derivation using PBKDF2
 - Using `Extension Manifest V2`
 - Mobile platform - Not implemented yet
 - Desktop platform - Not implemented yet
- Documentation generated by MkDocs

Software Architecture

Application Objects Composition

Free TON Wallet

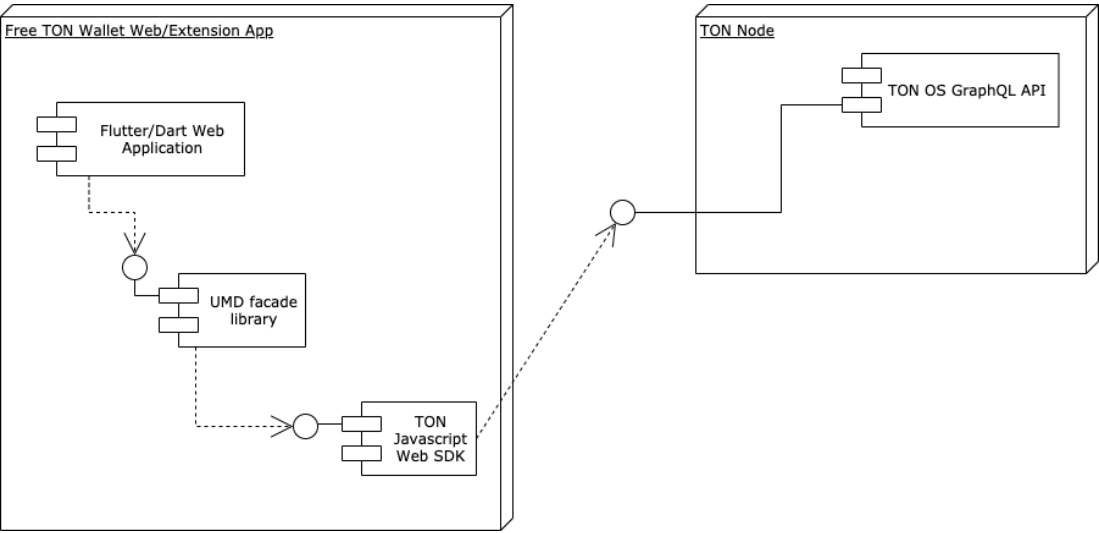
Application Objects Composition



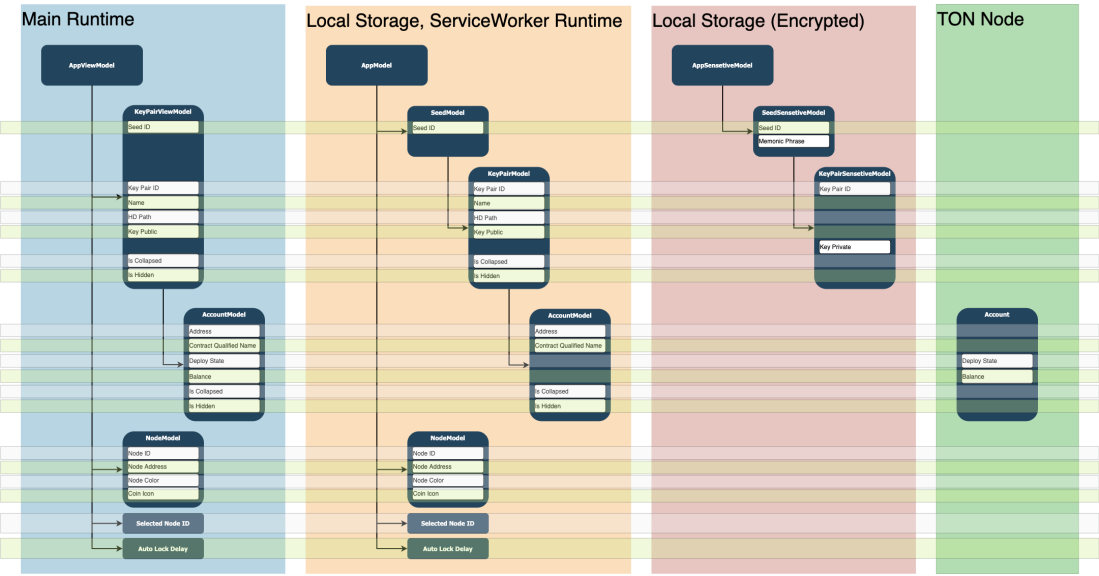
See Glossary in a Technical Paper to understand terms key, account, contract...

Components View

Web/Extension Application



Data Relation



Change Log

2021-03-21

- Start the project

Glossary

H

HDPATH

For example Free TON use value `m/44'/396'/0'/0'`.

Defines a logical hierarchy for deterministic wallets. Level 2 of the hierarchy describes a coin type in use.

Originally was desined for Bitcoin as BIP-0044.

See also:

- BIP-0044
- SLIP-0044 : Registered coin types for BIP-0044

M

Mnemonic Seed

Mnemonic phrase, **mnemonic seed**, or **seed** phrase are defined as a secret group of words that represent a wallet. When used in sequence they allow access to the cryptocurrencies stored within. "**Mnemonic**" just means a memory aid such as rhymes, abbreviations and songs that help you remember something else.

Safety Warning Do not take photos or screenshots. Other apps can get access to them. Write everything down on paper and store it in a safe place.

See also:

- Seed phrase
- Mnemonic phrase

W

Wallet

A word **Wallet** is a little bit abstract thing. Different applications have different meaing of the terms.

We use the word **Wallet** to define crypto wallet on the blockchain (smart contract).

Auto generated from <https://docs.freeton-wallet.org/>

Like a:

- TON wallets
- SafeMultisig
- SetCodeMultisig