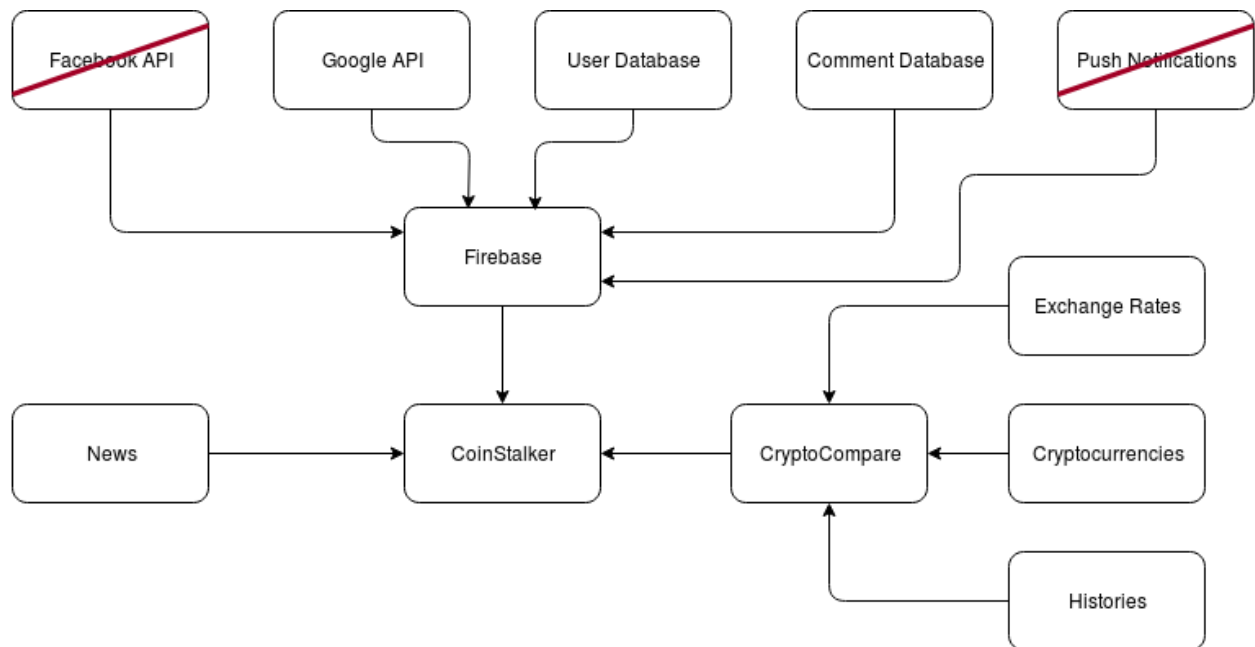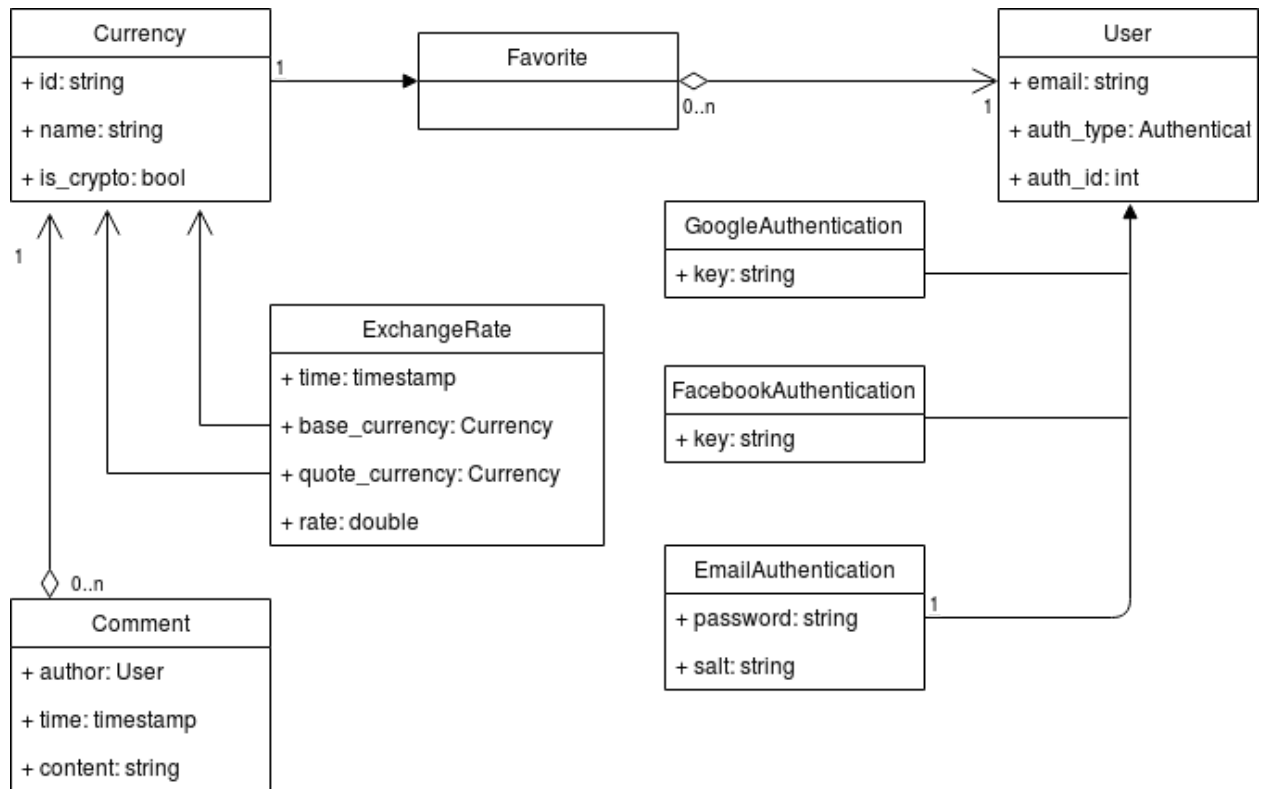# CoinStalker

Design Document

Description

This software project is a hybrid-mobile based implementation of a cryptocurrency tracking app. Our app will be called CoinStalker and it will allow users to keep with the latest exchange rates, updated in real-time, and latest news in the cryptocurrency world.
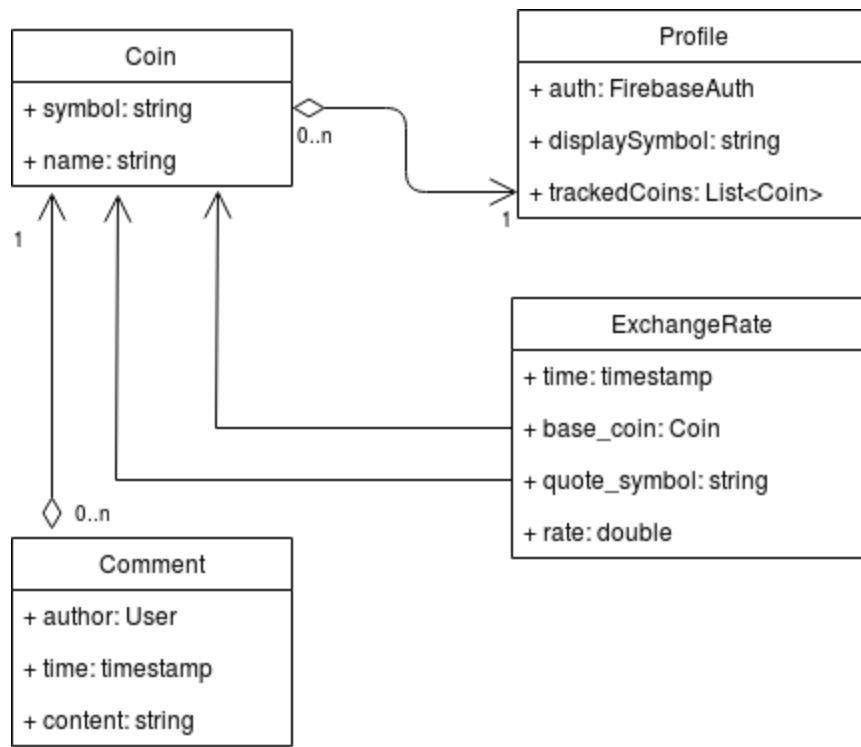
Data Flow Diagram

Class Architecture

Original

Currency
+ id: string
+ name: string
+ is_crypto: bool

Favorite

User
+ email: string
+ auth_type: Authenticat
+ auth_id: int

GoogleAuthentication
+ key: string

ExchangeRate
+ time: timestamp
+ base_currency: Currency
+ quote_currency: Currency
+ rate: double

FacebookAuthentication
+ key: string

EmailAuthentication
+ password: string
+ salt: string

Comment
+ author: User
+ time: timestamp
+ content: string

Final

User Stories

- **User account:** As a person interested in using Coinstalker, I want to have the option to sign up for an account that syncs my tracked coins across multiple signed in devices, so that I don't have to choose the currencies I'm interested in on each of my devices.
  More details: When I'm not logged in, my tracked coins are kept on my device instead of being synced.

- **Authentication API:** As an unregistered user, I want to use my ~~Facebook or~~ Google account to log in to the app, so that I do not have to create a new account.

- **Registration:** As an unregistered user, I want to use my email account with a password to log in to the app, so that I don't have to link my other accounts to this service.

- **Dashboard:** As a user, I want to see an overview of all of my tracked currencies, so that most of the information I want at a glance is in one place.
  More details: I want to see recent changes since I last opened the app and a graph of activity for my tracked currencies.

- **Currency list:** As a user, I want to see a list of all of the coins that I can track, so that I can explore cryptocurrency.
  More details: I also want to be able to favorite some currencies that I am interested in.

- **Currency filtering:** As a user, I want to be able to search and filter the list of currencies, so that I can find the cryptocurrencies I am interested in.
  More details: I want to be able to filter by name and value.

- **Currency sorting:** As a user, I want to be able to sort the list of currencies by different fields, so that I can compare cryptocurrencies.
  More details: I want to be able to sort by name, value, or volatility.

- **Currency details:** As a user, I want to be able to tap specific currencies and see more details about that currency.
  More details: I want to see a graph of activity for that currency.

- **Share menu:** As a user, I want to use the built-in share menu for my device to send currencies to my friends.
  More details: I want to send a message with the name of the currency, its current value, and a link that opens the Coinstalker app on that currency page.

- **Deep linking:** As a user, I want to be able to open the app to a specific page from a link that I receive.

- **Exchange rate configuration:** As a user, I want to be able to configure the program to display exchange rates in my local currency (USD, EUR, GBP, etc), so that the currency values are relatable.

- **Exchange rate calculator:** As a user, I want to show the exchange rate between two different currencies of my choice, so that I can compare cryptocurrencies.

- **Push notifications:** As a user, I want to receive notifications on my tracked currencies, so that I am kept up-to-date without needing to manually check the app.
  More details: I want to be able to set a percentage threshold for changes in the value of that currency, either up or down.

- **Cryptocurrency news:** As a user, I want to receive the latest news within the app about trending cryptocurrency news, so that I can stay informed and make educated decisions.

- **User commenting:** As a user, I want to be able to converse with other users about topics relating to a specific cryptocurrency, so that I can find out more information about that currency and its trends.