



CRYPTORUN

<PROJECT PAPER>

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EXECUTIVE SUMMARY

Problem Statement

- Cryptocurrency market is highly volatile, prone to sudden change ,therefore traders' investment are at higher risk.
- Currently traders have to invest more time gaining information, trends, news about tokens to make their trading decisions, as it is fragmented all over different media like twitter, reddit, telegram etc.

Main System Objectives

- An integrated system to provide all token related information
- Help trader to engage in data driven and confident trading decisions
- Perform sentiment analysis on influencers' tweets to show market sentiment
- Show price trend, volatility, recent news, announcements and live feeds etc.

Business Benefits

- Profit margin of traders expected to increase by considerable amount
- Trading volume will increase, hence cryptocurrency exchanges also on more profit
- Popularity score benefits for influencer and can gather huge fan following

STAKEHOLDERS

Here is a list of stakeholders of CryptoRun -

1. Cryptocurrency Traders
2. Influencers
3. Early Adopters
4. Cryptocurrency Exchanges
5. Investors
6. System Admin
7. Developers
8. IT Admin

REQUIREMENT GATHERING

The initial phase of developing CryptoRun started with collecting requirement using different techniques, as discussed below-

1. Primary source is collecting tweets of influencer users using twitter API, because the system will need this to generate market sentiment.
2. Collect customers feedback and suggestions using a survey to get an idea of their expectations.
3. Listing down crypto influencers/gurus/enthusiasts in my contact to interview them to gain fundamental and technical insights of the crypto market.
4. Create a public group on social media like twitter, telegram reddit to get interested user suggestions and expectations because social media is the most vast community of crypto traders.
5. Look up online for similar application/system for my research purpose to locate ignored or missing areas and build a superior quality
6. I myself start using a similar app so that I can get a user perspective, be the user !

USERS AND USER GOALS

Primary users of the CryptoRun were defined with the function goals they should be able to perform. The main users are Crypto Traders and Influencers.

USERS	USER GOALS
Crypto Traders	Add/remove token of interest
Crypto Traders	Check last 24 hours price trend, %age change, read market
Crypto Traders	Check number of mentions of certain token and its sentiment
Crypto Traders	Be able Inform/tag friend if found something shareable
Crypto Traders	Be able to use filter function, sorting and search as required

Crypto Traders	Get notifications about price change, alerts, related announcements etc.
Influencer users	Check out sentiment before/after their post
Influencer users	Monitor changes and market mood
Crypto Traders	Follow/unfollow influencer
Crypto Traders	Check out influencer ranking, sort and filter influencer using different criteria
System Admin	System maintenance and upgrade
Influencer users	Checkout their ranking, followers, popularity score

USER STORIES

User stories were created with the help of users and stakeholders to quickly identify the functional goals of each user they want to perform on the system. These user stories come with 'Acceptance criteria' to indicate that the features must be present for the user to be satisfied with the resulting implementation.

User Story 1

As a 'crypto trader', I want to get information about the current price trend, %age change in a specific time period, number of mentions so that I can do data driven trading.

Acceptance Criteria :

1. There should be tweets from influencers to check for the number of mentions.
2. The different time period range option should be prompted on the screen for the user to select.
3. Displaying the %age change price in graph would be visually nice for users

User Story 2

As a crypto trader I want to get alerts and notifications about my tokens of interest to perform trade in real time.

Acceptance Criteria :

1. Tokens must be already added by the user in order to get alerts for those.
2. User should have subscribed with active email id/phone number to receive alerts.
3. There must be some related news or influencer post published in order to generate condition for alert.

User Story 3

As a crypto trader I want to see market sentiment and graphs to get more visuality so that I can trade better.

Acceptance Criteria :

1. Influencers must tweet so that those tweets can be used to generate market sentiment.

2. Twitter API can be used to collect tweets to perform sentiment analysis.

User Story 4

As a crypto trader I want to notify my added friends about any relevant information I consider important so that we can discuss it in real time.

Acceptance Criteria :

1. User must have added friends through his account in order to have real time discussion
2. The discussion could be triggered by any important news published or change in price of interested tokens.
3. There must be a chat box and lookup to support selecting and chatting with friends.

User Story 5

As a crypto trader I want to filter and sort my tokens and search pattern so that I can analyze the market with different parameters.

Acceptance Criteria :

1. There must be a lookup for customers with different parameters listed.
2. There must be a filter and sort button on the homepage.

User Story 6

As a crypto trader I want to follow/unfollow influencers to keep myself informed about their posts.

Acceptance Criteria :

1. The influencer account must be available for which the user want to follow/unfollow
2. A lookup option by name of influencers can help user find their account easily.
3. Follow/unfollow functionality can be availed using a single button click.
4. Recommend influencer account based on tokens added and search history.

User Story 7

As an influencer I want to read the market sentiment before/after my tweets so that I can see traders trading patterns.

Acceptance Criteria :

1. Tweets must be tweeted by influencer in order to perform sentiment analysis by the System.
2. The influencer account must be active so that he/she can see the change before/after his/her post.

User Story 8

As an influencer I want to check my rank and followers so that I can improve my popularity score.

Acceptance Criteria :

1. There must be one or more tweet(s) by the influencer to generate a ranking.
2. Top 5 influencers of the day must be displayed alongside the popularity score.
3. There must be one or more follower(s) to generate popularity score.

User Story 9

As a system admin I want to maintain and upgrade system configurations so that the system performance quality is not hampered.

Acceptance Criteria :

1. The access rights must be granted to the system admin to perform maintenance and upgrade operations.
2. Temporal events can be used to generate and email bi-weekly report of the system performance and bugs to system admin.

USE CASES AND EVENT TYPE

Use Case is an activity that the system performs in response to a request by the user. The user stories developed above helped in defining and creating use cases for different users.

The use case activity can further be categorised into event type- External, Internal or Temporal

USE CASES (For trader)	EVENT TYPE
Add/remove token of interest	External Event
Check last 24 hour price trend	External Event
Check number of mentions and sentiment	External Event
Connect with friend	External Event
Sort and filter tokens	External Event
Receive alert(s)	Internal/ State Event
Follow/Unfollow Influencer(s)	External Event
Sort and filter influencer(s)	External Event
Give influencer rating(s)	External Event

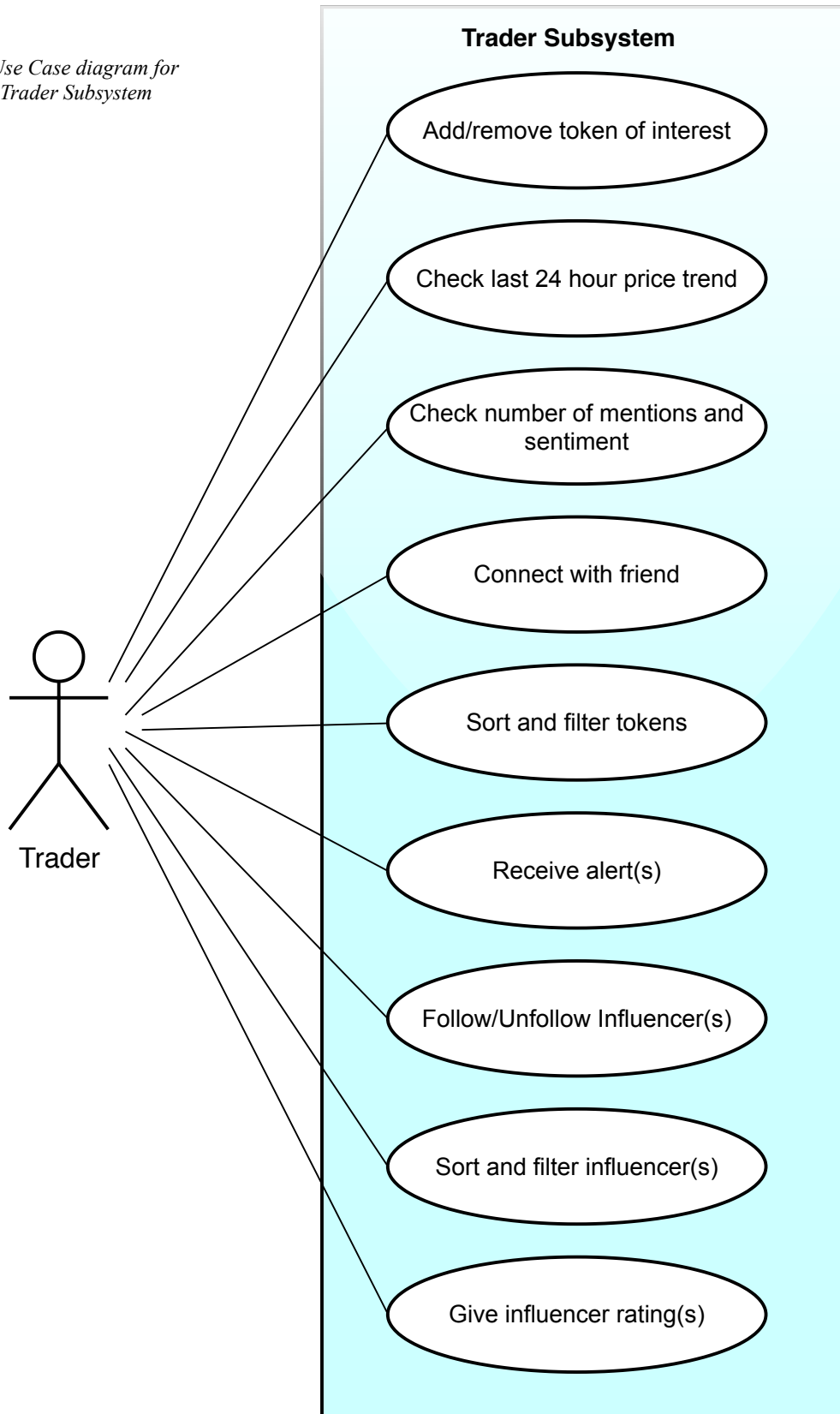
USE CASES (For Influencer)	EVENT TYPE
Check market sentiment	External Event
Check rank	External Event
Check follower(s) count	External Event

USE CASES (Billing & Maintenance)	EVENT TYPE
Generate monthly bills	Temporal Event
Generate system maintenance report	Temporal Event

USE CASE DIAGRAMS

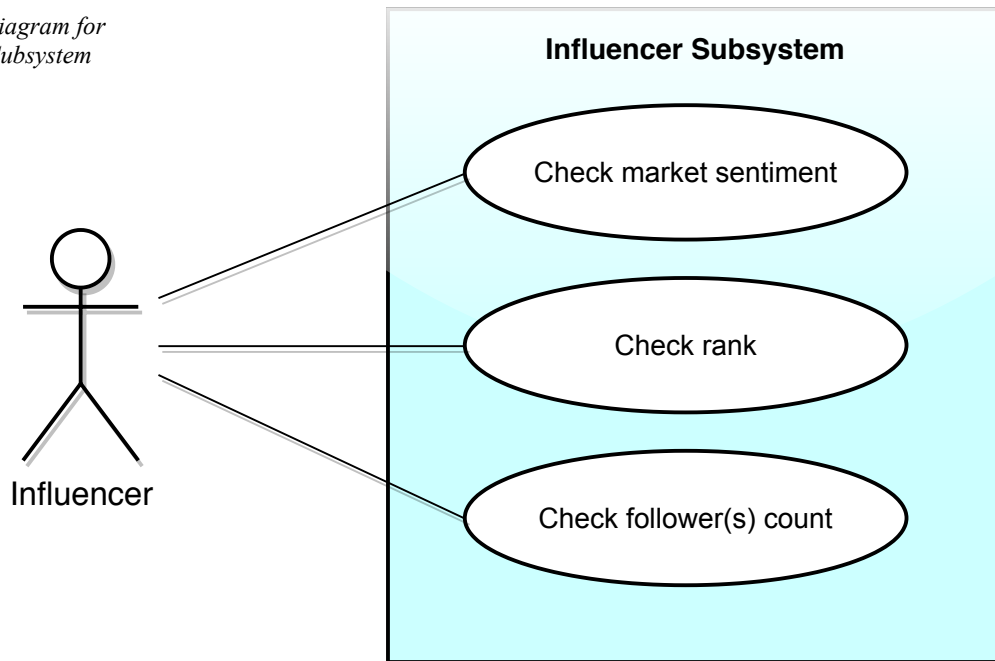
The following use case diagram shows the actor 'Trader' and his use cases

a. Use Case diagram for
Trader Subsystem



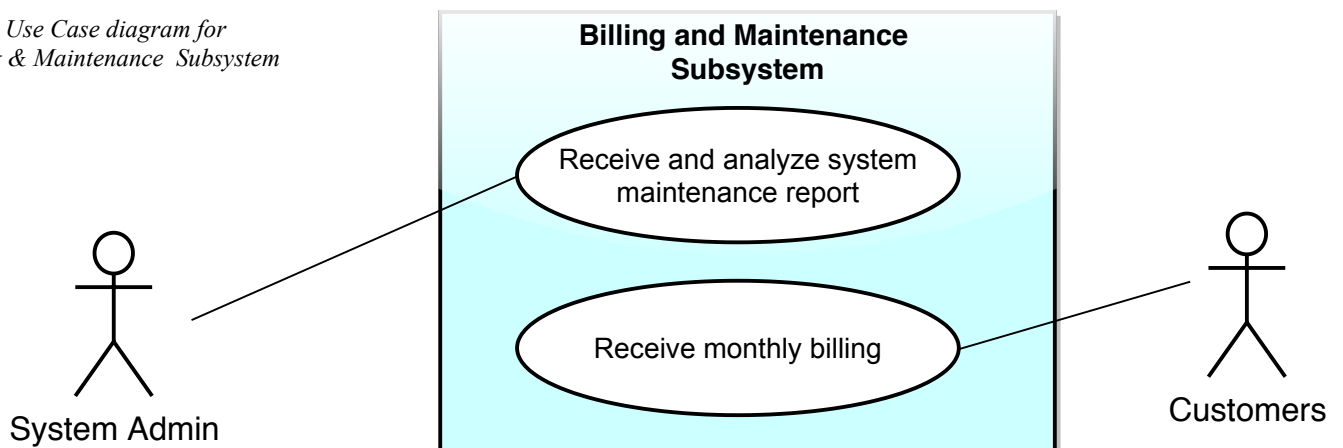
This use case diagram has 'Influencer' as an actor and his use cases

b. Use Case diagram for Influencer Subsystem



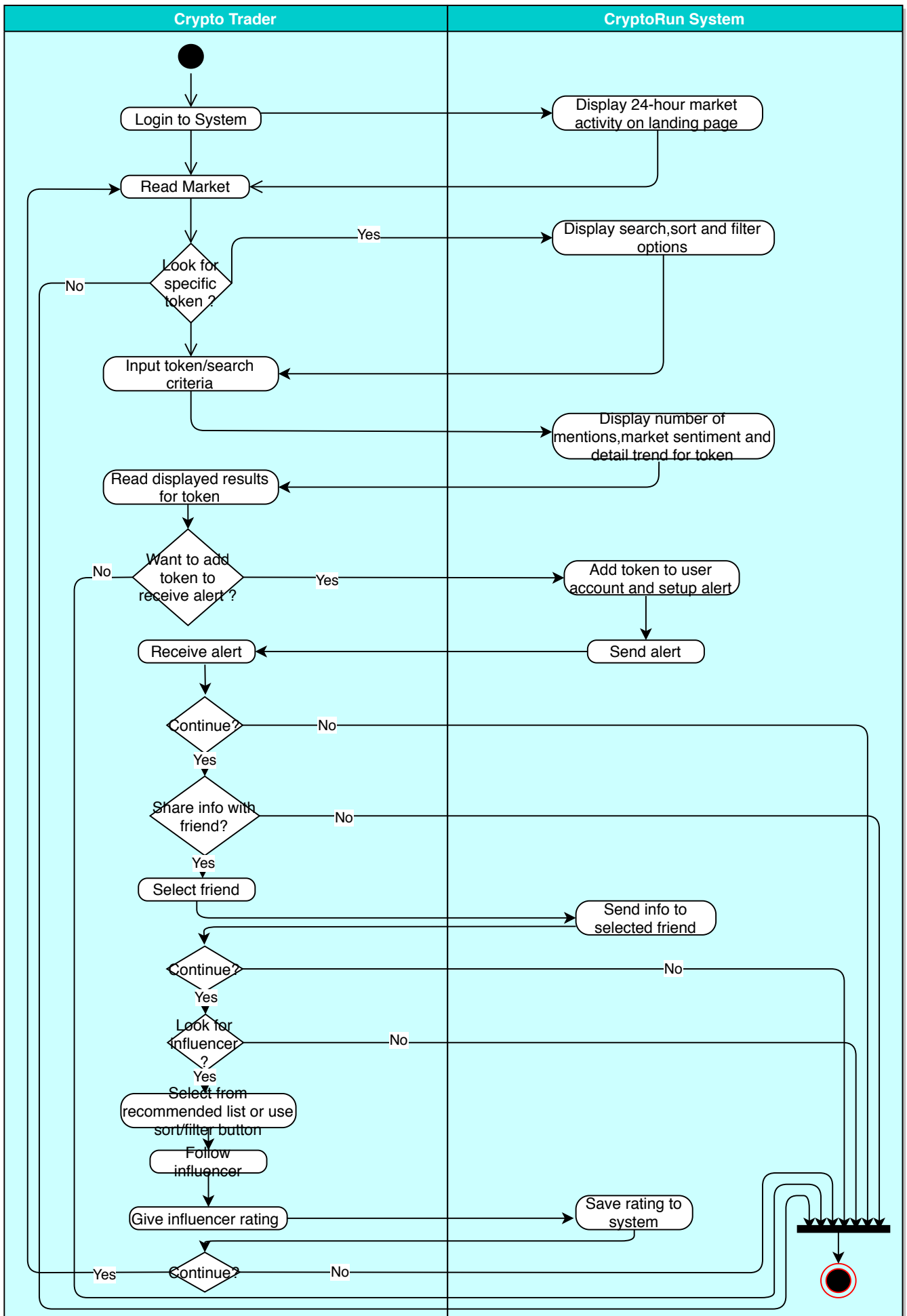
Below is the use case diagram for Billing and Maintenance Subsystem where 'System Admin' and 'Customers' are actors

c. Use Case diagram for Billing & Maintenance Subsystem



ACTIVITY DIAGRAM

The activity diagram below illustrates the high level workflow between Crypto Trader and CryptoRun system



DOMAIN CLASSES AND ATTRIBUTES

The list of things related to CryptoRun which were used to identify main problem domain classes and their attributes -

CryptoTrader	Influencer	Friend	Tokens
Utility Tokens	Equity tokens	Reward tokens	Asset tokens
Currency tokens	Market Sentiment	Followers	Feeds
Push Notifications	Smart Phone	Social Media Handles	Contributors
Posts	User Account	Shared Links	Chat Box
News	User Portfolio	Popularity Score	Social Engagements
Exchanges	Monthly bills	System Admin	APIs
Market Volume	Spams	Alt Coins	Volatility

Main Domain class and attributes-

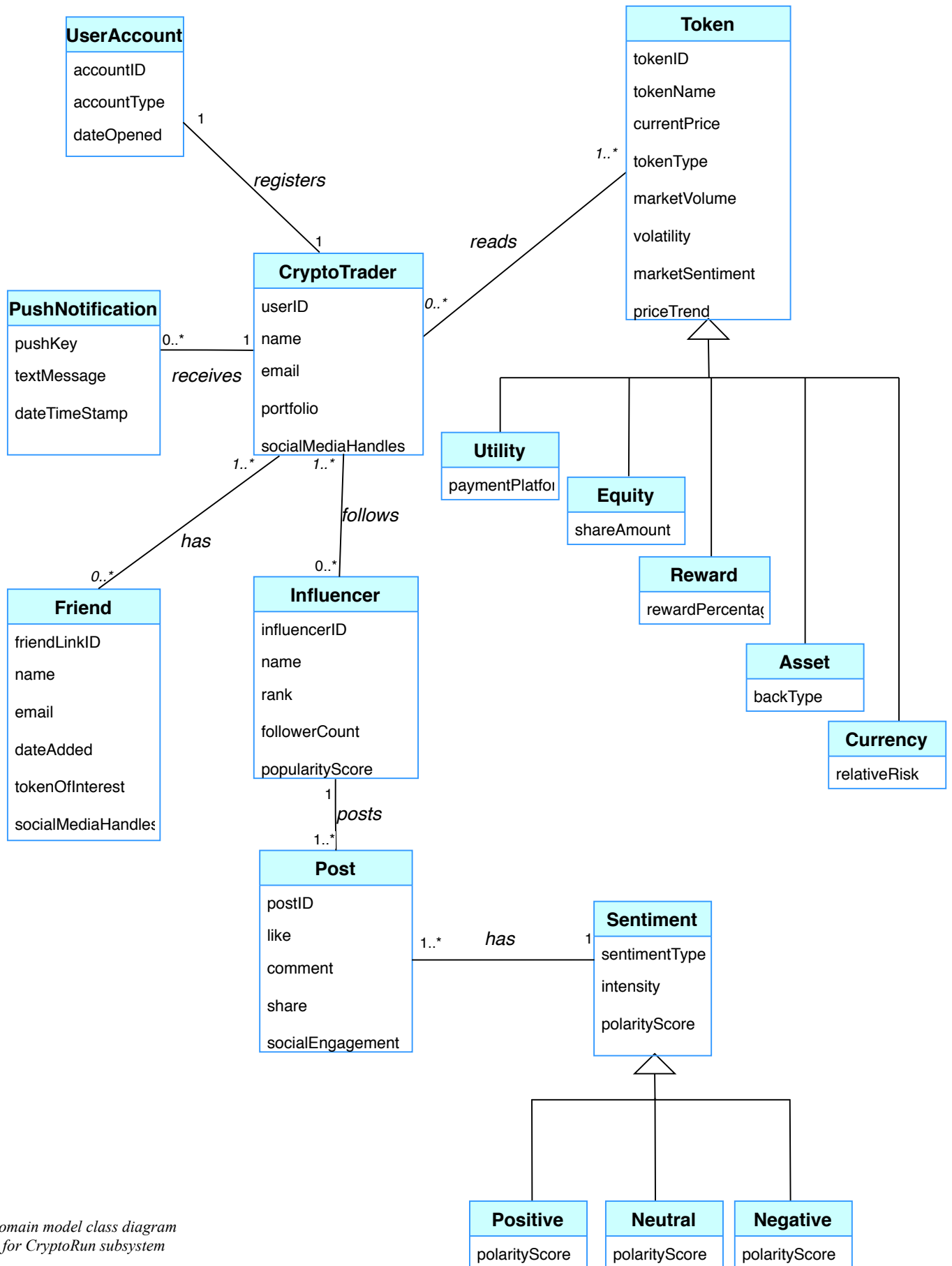
DOMAIN CLASS NAME	ATTRIBUTES
CryptoTrader	UserID {key} Name Email Portfolio Social media handles
Token	TokenID {key} TokenName Current price Market Volume Volatility Market Sentiment Price trend Token Type
Influencer	InfluencerID {key} Name Rank Follower count Popularity Score
Friend	Friend Link ID {key} Name Email Date added Token of interest Social Media Handles

User Account	Account ID {key} Account type Date Opened
Push Notification	Push key {key} Text Message DateTimeStamp
Post	Post ID {key} Like Comment Share Engagement
Sentiment	Sentiment type Intensity Polarity Score

DOMAIN CLASS DIAGRAM

CryptoRun System Constraints for designing main domain class diagram-

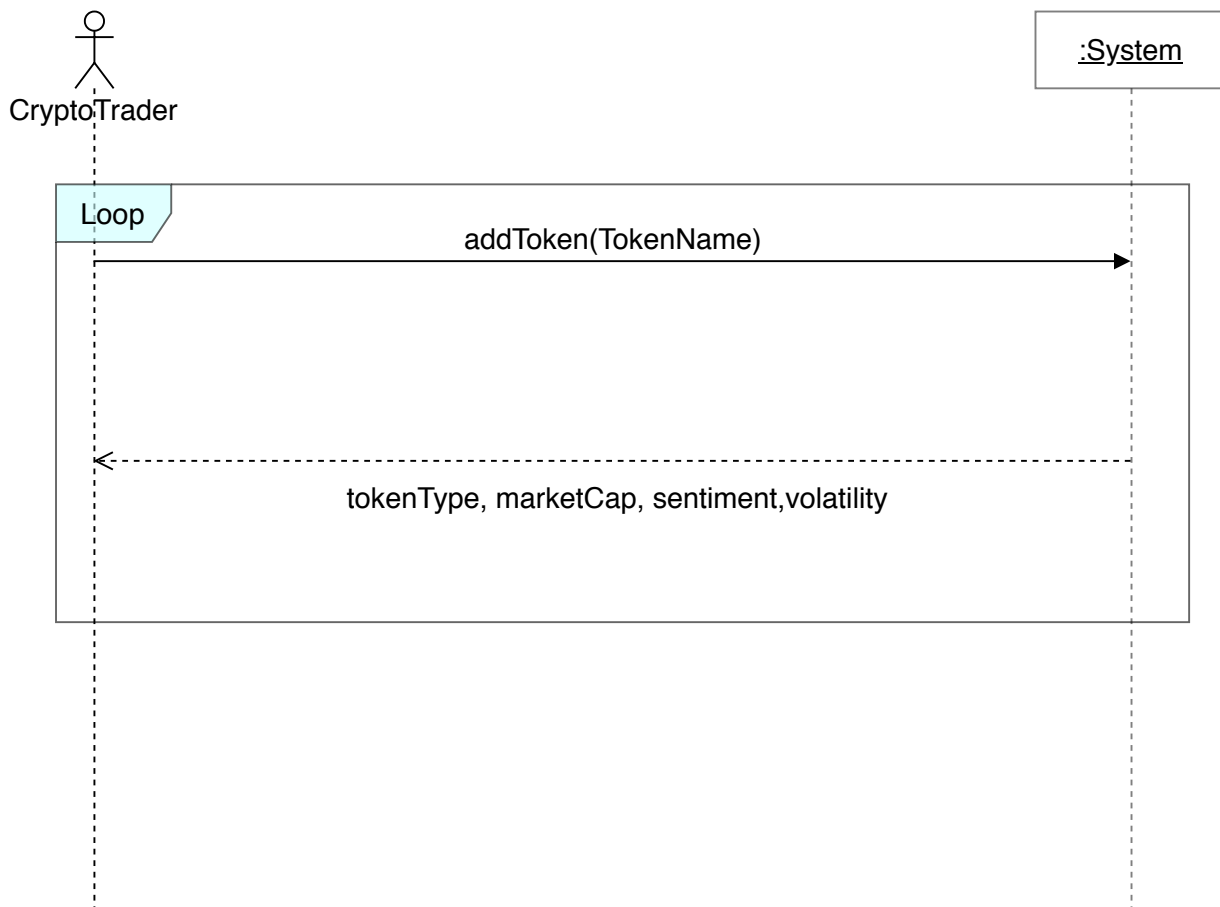
- a. CryptoTrader must have at least added 1 or more token(s)
- b. CryptoTrader can follow 0 or many influencer(s)
- c. Influencers must have at least 1 or more follower(s). In this system, cryptoTraders are followers
- d. Token can be added by 0 or many users
- e. Crypto Trader must have a user account and one user account must be associated with only one CryptoTrader.
- f. Unique push notifications/alerts can be sent to only one crypto trader while a crypto trader can receive 0 or many notifications.
- g. A crypto trader can have 0 or many friends. A friend can be associated with one or many crypto traders.
- h. A unique post is posted by a single influencer , while an influencer must post at least 1 or many posts.
- i. A post has unique sentiment in real time while one sentiment can be associated with many posts.
- j. Token class is a parent class /superclass for - utility token, equity token, reward token, asset token and currency token . All the child class/sub class will inherit the attributes from parent class and can have their own unique attributes too.
- k. Similarly, Positive sentiment ,Negative sentiment and neutral sentiment are child class for superclass/parent class - Sentiment. 'Sentiment' class is the only class in my domain diagram which does not have a key.



Domain model class diagram
for CryptoRun subsystem

SYSTEM SEQUENCE DIAGRAM [SSD]

The below SSD illustrates how trader is going to communicate with the system for add token use case by passing token name as input and then system will add the token and will return information about the token



*SSD for CryptoTrader
add Token use case*

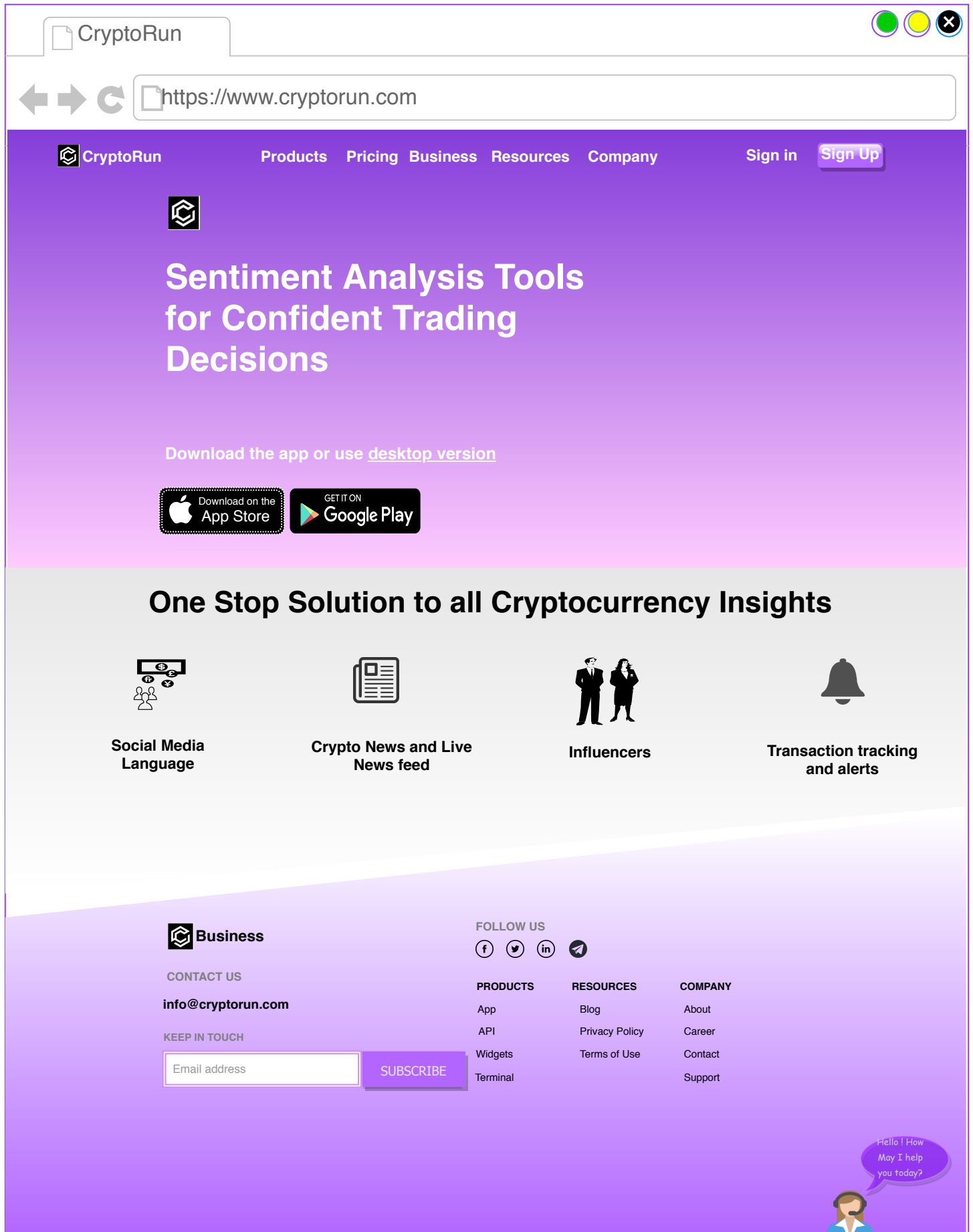
The below SSD illustrates interaction of Influencer with the CryptoRun system for request report use case. Influencer is requesting a report by passing postID and influencer ID to the system, the system returns all the information as shown below



MOCKUP SCREEN

Mockup screen of Landing Page

It has all the required informations and options a user might need before using this system. He can get an overview of what he is going to get out of it. To help out more self explanatory icons are added



Mockup screen of Most used page

Below screen has all the required information a user needs to have a quick and real time look of current market trend

CryptoRun


← → ↺

https://www.cryptorun/activity/?ref=app_tab

SOCIAL LISTENING FOR CRYPTO


Discovering Social traction of cryptocurrency market in social media

COIN OF THE DAY

 **THETA TOKEN**


Total Social Volume

246,395




Total Social Engagement

603,789,220




Total Shared Links


35,789 URLs





Social Sentiment







70% Bullish



Search 

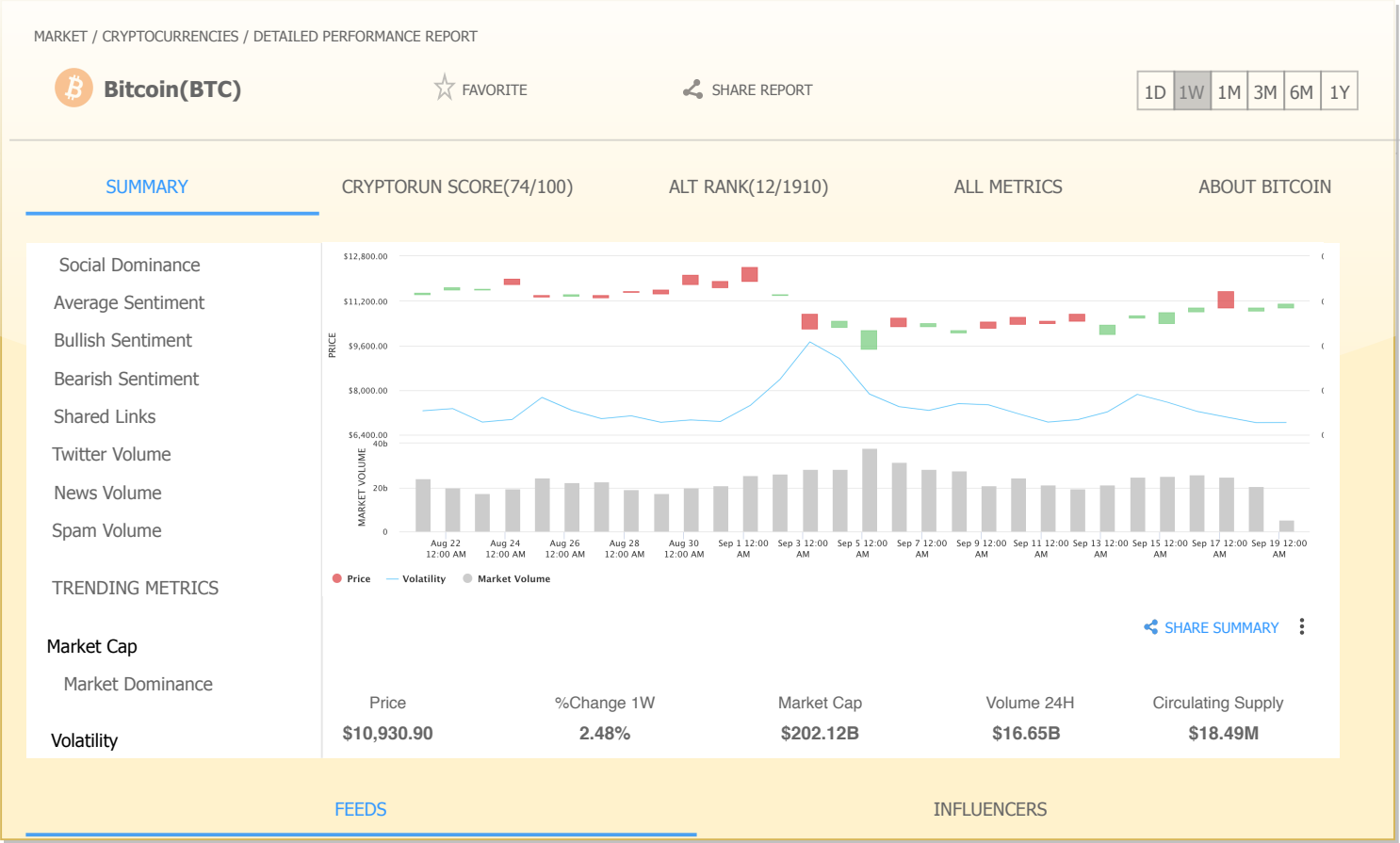




#	Coin	Price	24H% Change (USD)	24H% Change (BTC)	Market Volume	Volatility
1	 Zcash ZEC	\$59.107	0.17%	-0.24%	\$180.6M	0.012
2	 Rapids RPD	\$0.00121	0.42%	0.42%	\$5.7K	0.058
3	 Ethereum ETH	\$385.76	0.14%	0.14%	\$11.1B	0.009
4	 Dash DASH	\$73.232	0.70%	0.70%	\$216.7M	0.008
5	 Bitcoin BTC	\$11,110.07	1.68%	0.00%	\$18.7B	0.005
6	 XRP XRP	\$0.2518	-0.41%	-0.41%	\$769.2M	0.002

Detailed Report Mockup page

User can generate report whenever he want by selecting the specific token and time period. The detailed report will show all the details of the selected token over the time period. To make it more comprehensible , graphs are added. This report also have a share feature button which can be used by Traders to share reports to anyone.



CONCLUSION & RECOMMENDATION

Summary Conclusion

1. Trading experience of crypto traders will enhance and will increase their profit margin
2. Traders will be able to tackle the volatility of crypto market more efficiently in real time
3. More business for cryptocurrency exchanges
4. Influencers will have advantage in creating their fan following

Funding recommendation

1. Plan is to raise investment money through ICO (Initial Coin Offering) for target figure is \$50K
2. Timeline to reach alpha testing stage would be six weeks and further two weeks for beta testing
3. ROI for my investors would be early access to the CryptoRun system, compared to general public

Future Upgrade recommendation

1. Expanding the system to other social media platforms like reddit and telegram
2. Building program for automatic curation of influencers