**CryptoCurrency** **Project** **Design Document**

**Docker Containers Communication**

There are 4 Docker container components in CryptoCurrency Pubsub Application. I have built the containers using javascript frameworks. They are actively interacting with each other. The four containers are listed below-

* Publisher - Node.js
* Subscriber - React.js.
* Pubsub System - Node.js & Express.js.
* Mongo Database

The containers communicate as follows-

* + 1. Subscriber, Publisher and Database run on separate docker containers.
    2. The subscriber log in with id and password and expresses interest in cryptocurrency.
    3. The container records information and sends to Pubsub system.
    4. Publishers fetches the currency topics from External API Data and send to Pubsub.
    5. The Pubsub stores the subscription information from Subscriber and currency data from Publishers inside the Database.
    6. Client requests subscribed currency data and displays to all interested subscribers.

**Deploy Docker Application**

Follow these steps to run my docker application Currency Subscriber Pubsub Application

* 1. Pull docker-compose.yml file from Github from the following url: *https://github.com/smish25/decentralize\_pub\_sub.git*
  2. Remove the build tag from the file and replace for client and server services.
  3. Run the following command docker-compose up to start all the containers simultaneously.

ARCHITECTURE DIAGRAM

Crypto-currency PubSub Application

Docker

Operating System

**Hardware**

Flow Chart

SUBSCRIBER

PUBLISHER

PUB-SUB

MongoDB

Mongo Express