RClient for the meXBT DATA API

Introduction

R Code API for connecting to the **meXBT - The Mexican Exchange of Bitcoins**, *Public* API. This code is a series of functions for building *GET Request Queries* in order to pull information from the **meXBT** system, this can be read at their HomePage

- **License:** GNU General Public License
- **Location:** Mexico City

R Packages/Libraries used

Some important functions are used to build this API Client/Wrapper. Most of them come from the following packages/libraries, which official documentation is also included in this repossitory:

- **base**: *Base Statistical and data functions in R.*
- **httr**: *Tools for Working with URLs and HTTP.*
- **jsonlite**: *A Robust, High Performance JSON Parser and Generator for R.*
- **lubridate**: *Make dealing with dates a little easier.*
- **plyr**: *Tools for Splitting, Applying and Combining Data.*
- **RCurl**: *General network (HTTP/FTP/...) client interface for R.*
- **xts**: *eXtensible Time Series.*
- **zoo**: *S3 Infrastructure for Regular and Irregular Time Series.*

You can check and download the official documentation for these packages from this repository Here or from the **CRAN** site Here

Data API Info Provided

- **Order Book** For every market available, currently two: Btc/Usd and Btc/Mxn.
- **Historical Trades** Every trade executed at the exchange, for both markets.
- **Actual Tick (Price)** Present ticker price of Btc/Usd and Btc/Mxn.

How to use this RClient ?

All you need is to locate the function which provides the information you required, current supported are the following:

- **Order Book** is requested with: **meXBTOrderBook***(BtcPair)*
- **Historical Trades** is requested with: **meXBTHistoricPrices***(BtcPair,TimeZonePar,InfoSince)*
- **Actual Tick (Price)** is requested with: **meXBTTicker***(BtcPair)*

Type of entry info and formats

- **BtcPair** : Either **btcusd** (BitCoin Vs American Dollar) or **btcmxn** (BitCoin Vs Mexican Peso)
- **InfoSince**: Parameter that specifies the tick/trade number from which you want to fetch data, 0 is from the very begining of our data and that is "2014-05-12 21:16:34 CDT" for both btcusd and and btcmxn.
- **TimeZonePar**: Fomart as stated by the **IANA** (Internet Assigned Numbers Authority) time zone database, a complete list can be found **Here**, and more info about **TZ DataBse** in **Here**

Current Functions in RClient

```
Eg1 <- meXBTTicker("btcmxn")                                    # meXBTTicker(BtcPair)
Eg2 <- meXBTOrderBook("btcmxn")                                 # meXBTOrderBook(BtcPair)
Eg3 <- meXBTHistoricPrices("btcusd","America/Mexico_City",650)  # meXBTHistoricPrices(BtcPair,TimeZoneP
```

Specific HTTP Character String to fetch data manually

Or if you want/need to build your own *http* GET - POST functions, all you need is to generate character strings like the following and receive the response in **JSON** format.

```
# HTTP Address to fetch from for Btc/Usd
HttpAddress <- "https://data.mexbt.com/order-book/btcusd"
# HTTP Address to fetch from for Btc/Mxn
HttpAddress <- "https://data.mexbt.com/order-book/btcmxn"
```

Order Book

```
# HTTP Address to fetch from for Btc/Usd
HttpAddress <- "https://data.mexbt.com/trades/btcusd?since=0"
# HTTP Address to fetch from for Btc/Mxn
HttpAddress <- "https://data.mexbt.com/trades/btcmxn?since=0"
```

Historical Trades

```
# HTTP Address to fetch from for Btc/Usd
HttpAddress <- "https://data.mexbt.com/ticker/btcusd"
# HTTP Address to fetch from for Btc/Mxn
HttpAddress <- "https://data.mexbt.com/ticker/btcmxn"
```

Actual Tick (Price)

An Easy Example

This code generates a request to fetch Btc/Mxn Exchange Rate, convert the response from *JSON* format to a *data.frame* object, then modify the unix timestamp to a Human readable format to finally re-organize the columns and deliver a tidy *data.frame* ready to use for any computation.

```
HmeXBTBtcMxn1 <- "https://data.mexbt.com/trades/btcmxn?since=12205"          # 12205 an
HmeXBTBtcMxn2 <- getURL(HmeXBTBtcMxn1,cainfo=system.file("CurlSSL",          # arbitrary
                 "cacert.pem",package="RCurl"))                              # Example
HmeXBTBtcMxn3 <- data.frame(fromJSON(HmeXBTBtcMxn2))

BtcMxn <- data.frame(HmeXBTBtcMxn3$tid,
          as.POSIXct(as.numeric(as.character(HmeXBTBtcMxn3$date)),           # BTC/MXN
          origin = '1970-01-01', tz='America/Mexico_City'),                  # Date
          HmeXBTBtcMxn3$price, HmeXBTBtcMxn3$amount)                         # Formated
colnames(BtcMxn) <- c("TickerID","TimeStamp","Price","Amount")               # Posixct
```

This should return two *data.frame* objects, first **HmeXBTBtcMxn3** is in raw format, in order to you can change the *TimeStamp* with your current *Time Zone*, **BtcMxn** object is with *'America/Mexico_City' Time Zone* , also the content is reorganized like the following:

TickerID	TimeStamp	Price	Amount
12205	2015-06-25 17:02:21	3736.33	0.99375858
12206	2015-06-25 17:06:07	3739.43	0.38670599
12207	2015-06-25 18:51:46	3744.02	0.20790000

FranciscoME: *Research & Development* - franciscome@mexbt.com