

Final

Multi coin support

Coins

- BTC
- XMR

```
package com.vigilantbag.btceexchange;

import java.nio.charset.Charset;
import java.time.LocalDate;
import java.util.ArrayList;
import java.util.Map;
import java.util.Scanner;

import com.litesoftwares.coingecko.CoinGeckoApiClient;
import com.litesoftwares.coingecko.constant.Currency;
import com.litesoftwares.coingecko.impl.CoinGeckoApiClientImpl;

public class App {
    public static class getLive {

        public double btcPrice() {
            CoinGeckoApiClient client = new CoinGeckoApiClientImpl();
            Map p = client.getPrice("bitcoin",Currency.USD);
            String pString = p.toString();
            String psClean1 = pString.replace("{bitcoin={usd=", "");
            return Double.parseDouble(psClean1.replace("}", ""));
        }

        public double xmrPrice() {
            CoinGeckoApiClient client = new CoinGeckoApiClientImpl();
            Map p = client.getPrice("monero",Currency.USD);
            String pString = p.toString();
            String psClean1 = pString.replace("{monero={usd=", "");
            return Double.parseDouble(psClean1.replace("}", ""));
        }

    }

    private static class myDate {
        //Don't have one lol.
        LocalDate date = LocalDate.now();
    }

    private static class wallet {
        private double BTC = 0;
        private double XMR = 0;
        private double USD = 100000;
    }

    private static class ledger {
```

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ArrayList<String> ledgerArr = new ArrayList<String>();
```

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}  
public static void main(String[] args) throws Exception {  
    System.out.println(Charset.defaultCharset());  
    System.setProperty("file.encoding", "UTF-8");  
    myDate myDate = new myDate();  
    ledger ledger = new ledger();  
    wallet wallet = new wallet();  
    boolean run = true;  
    getLive gL = new getLive();  
    Scanner input = new Scanner(System.in);  
    do {  
        System.out.println("Choose coin");  
        System.out.println("Coins: BTC, XMR");  
        String coinChoice = input.nextLine();  
        switch (coinChoice) {  
            case "BTC":  
                System.out.println("~~Menu~~\n");  
                System.out.println("buy\nsell\nprice\nbalance\nledger\nhelp\nexit");  
                System.out.print("\n>");  
                //System.out.println(gL.price());  
                String userInput = input.nextLine();  
                String[] plusSplit = userInput.split(" ");  
                switch (plusSplit[0]) {  
                    case "buy":  
                        double purchased = (Double.parseDouble(plusSplit[1]) * gL.btcPrice());  
                        wallet.USD = wallet.USD - purchased;  
                        wallet.BTC = wallet.BTC + Double.parseDouble(plusSplit[1]);  
                        System.out.println("You have bought " + plusSplit[1] + " BTC");  
                        System.out.println("Remaining USD balance: $" + wallet.USD);  
                        System.out.println("Remaining BTC balance: ฿" + wallet.BTC);  
                        ledger.ledgerArr.add("(Type: Purchase Date: " + myDate.date + " BTC: ฿" +  
Double.parseDouble(plusSplit[1]) + " at USD: $" + gL.btcPrice() + ") ");  
                        break;  
                    case "sell":  
                        double sold = (Double.parseDouble(plusSplit[1]) * gL.btcPrice());  
                        wallet.USD = wallet.USD + sold;  
                        wallet.BTC = wallet.BTC - Double.parseDouble(plusSplit[1]);  
                        ledger.ledgerArr.add("(Type: Sell Date: " + myDate.date + " BTC: ฿" +  
Double.parseDouble(plusSplit[1]) + " at USD: $" + gL.btcPrice() + ") ");  
                        break;  
                    case "price":  
                        System.out.println("Current BTC price is: $" + gL.btcPrice());  
                        break;  
                    case "balance":  
                        System.out.println("USD: $" + wallet.USD);  
                        System.out.println("BTC: ฿" + wallet.BTC);  
                        break;  
                    case "ledger":  
                        System.out.println(ledger.ledgerArr);  
                        break;  
                    case "help":  
                        System.out.println("buy #BTC          (amount of BTC to purchase)      Buy  
BTC with USD\nsell #BTC          (amount of BTC to sell)       Sell BTC for USD\nprice          Lists
```

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current BTC price in USD\nbalance      Displays balance of coins (USD and BTC)\nledger
Displays ledger of transactions");
        break;
    case "exit":
        run = false;
        break;
    default:
        System.out.println("Unknown choice. Returning to main menu.");
        Thread.sleep(2000);
        break;
    }
    break;
case "XMR":
    System.out.println("~~Menu~~\n");
    System.out.println("buy\nsell\nprice\nbalance\nledger\nhelp\nexit");
    System.out.print("\n>");
    //System.out.println(gL.price());
    userInput = input.nextLine();
    plusSplit = userInput.split(" ");
    switch (plusSplit[0]) {
        case "buy":
            double purchased = (Double.parseDouble(plusSplit[1]) * gL.xmrPrice());
            wallet.USD = wallet.USD - purchased;
            wallet.XMR = wallet.XMR + Double.parseDouble(plusSplit[1]);
            System.out.println("You have bought " + plusSplit[1] + " XMR");
            System.out.println("Remaining USD balance: $" + wallet.USD);
            System.out.println("Remaining XMR balance: XMR" + wallet.XMR);
            ledger.ledgerArr.add("(Type: Purchase Date: " + myDate.date + " XMR:
XMR" + Double.parseDouble(plusSplit[1]) + " at USD: $" + gL.xmrPrice() + ") ");
            break;
        case "sell":
            double sold = (Double.parseDouble(plusSplit[1]) * gL.xmrPrice());
            wallet.USD = wallet.USD + sold;
            wallet.XMR = wallet.XMR - Double.parseDouble(plusSplit[1]);
            ledger.ledgerArr.add("(Type: Sell Date: " + myDate.date + " XMR: XMR"
+ Double.parseDouble(plusSplit[1]) + " at USD: $" + gL.xmrPrice() + ") ");
            break;
        case "price":
            System.out.println("Current XMR price is: $" + gL.xmrPrice());
            break;
        case "balance":
            System.out.println("USD: $" + wallet.USD);
            System.out.println("XMR: XMR" + wallet.XMR);
            break;
        case "ledger":
            System.out.println(ledger.ledgerArr);
            break;
        case "help":
            System.out.println("buy #XMR      (amount of XMR to purchase)      Buy
XMR with USD\nsell #XMR      (amount of XMR to sell)      Sell XMR for USD\nprice      Lists
current XMR price in USD\nbalance      Displays balance of coins (USD and XMR)\nledger
Displays ledger of transactions");
            break;
        case "exit":
            run = false;

```

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        break;
    default:
        System.out.println("Unknown choice. Returning to main menu.");
        Thread.sleep(2000);
        break;
    }
    break;
    default:
        break;
}

} while (run);
input.close();
System.exit(0);
}
}

```

```

Choose coin
Coins: BTC, XMR
BTC
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>buy 4
You have bought 4 BTC
Remaining USD balance: $-26176.0
Remaining BTC balance: ₿4.0
Choose coin
Coins: BTC, XMR
BTC
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>price
Current BTC price is: $31544.0
Choose coin
Coins: BTC, XMR
XMR
~~Menu~~

```

buy
sell
price
balance
ledger
help
exit

>price
Current XMR price is: \$194.27
Choose coin
Coins: BTC, XMR
BTC
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>sell 2
Choose coin
Coins: BTC, XMR
BTC
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>ledger
[(Type: Purchase Date: 2021-07-15 BTC: ₿4 at USD: \$31544.0) , (Type: Sell Date: 2021-07-15
BTC: ₿2.0 at USD: \$31544.0)]
Choose coin
Coins: BTC, XMR
XMR
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>buy 5

You have bought 5 XMR
Remaining USD balance: \$35940.65
Remaining XMR balance: XMR5.0
Choose coin
Coins: BTC, XMR
XMR
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>sell 2
Choose coin
Coins: BTC, XMR
XMR
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>balance
USD: \$36329.19
XMR: XMR3.0
Choose coin
Coins: BTC, XMR
BTC
~~Menu~~

buy
sell
price
balance
ledger
help
exit

>balance
USD: \$36329.19
BTC: ₿2.0
Choose coin
Coins: BTC, XMR
XMR
~~Menu~~

buy

sell
price
balance
ledger
help
exit

>ledger

[(Type: Purchase Date: 2021-07-15 BTC: ₮4 at USD: \$31544.0) , (Type: Sell Date: 2021-07-15 BTC: ₮2.0 at USD: \$31544.0) , (Type: Purchase Date: 2021-07-15 XMR: XMR5 at USD: \$194.27) , (Type: Sell Date: 2021-07-15 XMR: XMR2.0 at USD: \$194.27)]

Choose coin

Coins: BTC, XMR

BTC

~~Menu~~

buy
sell
price
balance
ledger
help
exit

>exit