

Quiz 2

Multi coin support

Coins

- BTC
- XMR

```
package com.vigilantbag.btcexchange;

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 {
```

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

```
    }  
    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 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;
        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: 14 at USD: $31544.0) , (Type: Sell Date: 2021-
07-15 BTC: 12.0 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