# Output data from hist table in .csv format

In the file query.js you have a program that will output the data to the screen. This is a good starting point, buy you have a few problems.

**Problem 1:** How do you create and write to a file from a node application using JavaScript? Try google to see how this is done.

**Problem 2:** The data need to be output in .csv format. The query.js progam outputs name value pairs. You need to do some work to get the CSV formatted output. Note that this can be done independently from writing the data to the file.

Here is the data...

\_id= 5c8d1bbbd721562d40f2c457

key= BuyBittrexSellPoloniexBTC\_VTC1552751547057

exch1Name= Poloniex

exch2Name= Bittrex

timeStamp= Sat Mar 16 2019 11:52:26

ccyPair= BTC\_VTC

exch1BuyAt= 0.00013318

exch1SellAt= 0.00013309

exch2BuyAt= 0.00013066

exch2SellAt= 0.00013015

gainLoss= GAIN

urgentTrade= true

arbPercent= 1.8426540284360104

exch1BuyOrSell= Sell

tradeInstructions= BTC\_VTC BUY at Bittrex for 0.000130660. SELL at Poloniex for 0.000133090 Gain 1.842654%

time= 1552751547

A .csv version of this looks like...

\_id,key,exch1Name,exch2Name,timeStamp,ccyPair,exch1BuyAt,exch1SellAt,exch2BuyAt,exch2SellAt,gainLoss,urgentTrade,arbPercent,exch1BuyOrSell,tradeInstructions,time

5c8d1bbbd721562d40f2c457,BuyBittrexSellPoloniexBTC\_VTC1552751547057,Poloniex,Bittrex,Sat Mar 16 2019 11:52:26,BTC\_VTC,0.00013318,0.00013309,0.00013066,0.00013015,GAIN,true,1.8426540284360104,Sell,BTC\_VTC BUY at Bittrex for 0.000130660. SELL at Poloniex for 0.000133090 Gain 1.842654%,1552751547

5c8d1bbbd721562d40f2c457,BuyBittrexSellPoloniexBTC\_VTC1552751547057,Poloniex,Bittrex,Sat Mar 16 2019 11:52:26,BTC\_VTC,0.00013318,0.00013309,0.00013066,0.00013015,GAIN,true,1.8426540284360104,Sell,BTC\_VTC BUY at Bittrex for 0.000130660. SELL at Poloniex for 0.000133090 Gain 1.842654%,1552751547

5c8d1bbbd721562d40f2c457,BuyBittrexSellPoloniexBTC\_VTC1552751547057,Poloniex,Bittrex,Sat Mar 16 2019 11:52:26,BTC\_VTC,0.00013318,0.00013309,0.00013066,0.00013015,GAIN,true,1.8426540284360104,Sell,BTC\_VTC BUY at Bittrex for 0.000130660. SELL at Poloniex for 0.000133090 Gain 1.842654%,1552751547

There is one header row containing the column names, followed by N rows of data.