Project Report
Group 1

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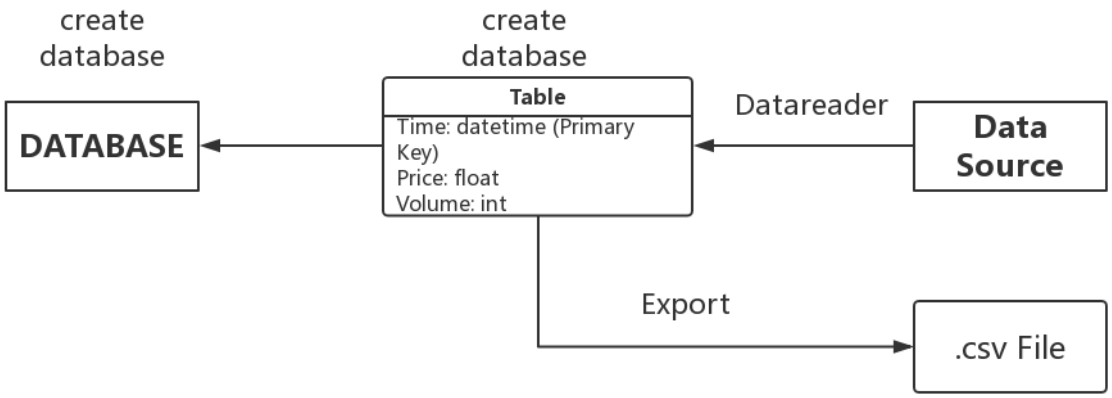
Contribution
Yuhang Zhou: Writing source code and tuning.
Jiachen Ding: Tuning the program and writing report.
Lichuan Ren: Setting up the dataset and working on schema.
Haofan Zhang: Collecting real-time data and working on documents.

All our group members make their efforts to contribute to our project, we consider this as equal contribution.

Introduction
In this project we try to implement an app which can continuously run to retrieves stock information, parses the received responses, and stores the extracted parameters into a local relational database. For now, we have already set up the local database and module to capture data and we have already collected real-time stock prices of 10 stocks and exported them as .csv file.

System Design



Our system is consisted of a local database which contains tables for storing stock prices, a data reader module which captures real-time data from the internet and an export module which exports data into .csv file.
First, we used mysql to create a local database and then tables in the database to record the data. For the real time data, we embedded data with three keys, which are Time, Price and Volume. The Time stands for datetime when the price is

sampled, Volume stands for the volume of specific stock. While there are more detailed keys for the price of history data like High, Low, Open, Close, Adj Close. To seize history data, we use DataReader function to get the data in the time range as we want. To seize real-time data from the internet, we have a timer to periodically start get_quote_yahoo function to get data from yahoo and insert into table as update.
Another module is to export selected data from table in company domain. Any company can be added into the dictionary. The exported data is saved as .csv file. History data as company.csv and real time data as company+rt.csv.

Reference

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https://dev.mysql.com/doc/refman/8.0/en/

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