Hi Rundong,

This is Julian from App Annie. We met on Skype a few days ago for the BI Engineer intern interview. Here I am inviting you to a final interview.

We need you to complete a small project in which we want you to program with Yahoo! Finance API to fetch some NASDAQ-listed stock information, design a few database tables and develop some Tableau reports on it.

**How to get data:**

Here is the list of stocks we want you to pull out from Yahoo! Finance API

[http://www.nasdaq.com/quotes/nasdaq-100-stocks.aspx](http://www.nasdaq.com/quotes/nasdaq-100-stocks.aspx" \t "_blank)

There is a Google Code project which is written in .net: [https://code.google.com/p/yahoo-finance-managed/](https://code.google.com/p/yahoo-finance-managed/" \t "_blank) and you can download the code from: [http://www.codeproject.com/Articles/42575/Yahoo-Managed](http://www.codeproject.com/Articles/42575/Yahoo-Managed" \t "_blank). You have two options:

* Use the code written in .net directly and enhance it a little bit to get the data we need
* Use the code as a reference and write JAVA / Python (or any other programming language) to fetch the data through Yahoo! Finance API

We would need their daily avg. price in year 2014 (at least). We would also like to get their sector and industry information. But the more info you could get (as described in the Google Code project - as attached below) it would be better.

* Finance Service
  + ID search
  + Quotes of financial products (stocks, indices, funds, ETFs, futures)
  + Currency exchange rates
  + Historical quotes of financial products
  + Technical analysing chart images
  + Sector, industry and company informations
  + Company Statistics
  + Company Profiles
  + Up to 88 quote properties
  + Over 140 currencies
  + 5 metals
  + Informations of more than 92 stock indices
  + Informations of about 82 stock exchanges
  + Exchange rate calculator
  + Indicator calculation for:
    - Moving Average
    - Exponential Moving Average
    - Envelopes
    - Bollinger Bands
    - Moving Average Convergence Divergence
    - Standard Deviation
    - Momentum
    - Rate of Change
    - Relative Strength Index
    - Williams Percent Range
  + Stock Screener for 70 criterias
  + Bond Screener

**Reporting and Requirements:**

We would like you to design your data model (Store your data in excel or Postgres or Access database or whatever RDBMS you prefer - Postgres and MySQL have free versions) and Tableau reports(Optional) to answer questions like:

* What are the top 10 stocks whose prices changes most in Q3 2014?
* What are the top 3 sectors (industry) that has the maximum number of stocks who change prices over 30% in first half of 2014?
* We want you to build at least 2 meaningful analysis by yourself.

Please let me know whether you have all the equipment (laptop, internet, software) to do this project. If you have any doubts about the form of the interview or the requirements, feel free to let me know. If Tableau is not something you want to use, please write some SQL and put raw data in excel to build some charts as well.

Tableau Desktop software, you can download it from [http://www.tableausoftware.com/products/desktop](http://www.tableausoftware.com/products/desktop" \t "_blank) and trial use it for 14 days.

Once you confirm this is doable, please provide an estimation of how much time you need for that and we will schedule the interview with you and invite you to our office to present to us (in **English**). My estimation is to get it done within 1 weeks if you are free all the time. However I am ok to adjust it.

Once again, feel free to let me know if there is any question. Have a nice day!

Thanks,

Julian