

Assignment II - Due Feb 21, 2017

February 20, 2017

The homework has 100pt. Please submit a single pdf file. You can paste your R code and SQL queries with result into pdf file. Please add comments in your code explaining what the code does. 10pt will be deducted if there is no comment.

Code style reference: <https://google.github.io/styleguide/Rguide.xml>.

1 Exercise I (30pt)

- Load the database into your database server.
- Connect to the database and describe the column information of accounting table.
- Use SELECT query to show the number of records with NULL value in commonequity column.
- Use SELECT query to show all records from ticker GOOGL.
- Use SELECT query to show total number of commonequity of GOOGL records. The result should only have 1 row.

2 Exercise II (30pt)

- Use both component and accounting table.
- Write only one SELECT query to return the results. The results should include all records in accounting table whose ticker is included in component table.
- Write only one SELECT query with JOIN syntax to return the results. The results should include all records from accounting table whose ticker is included in component table and the year of the record is 2016.

3 Exercise III (40pt)

- Pick up a ticker from component table and download 1-year daily stock price data using R API and save it into a data frame (STOCK_DATA).
- Use R to get the date range of your stock data (stock_date_range).
- Use R API to run a SELECT query to extract records from accounting table. The records in result should have date within the stock_date_range and are ordered based on date (ascending). Normally, you should get more than 1 records. And the result is in data frame format (ACCT_DATA).
- Save your result into a csv file.
- Use the data frame (ACCT_DATA) in previous question and get the record(s) with the same ticker as your stock data. (Because you just downloaded 1-year data, the result may only include 1 record or no record.)