Time:4-00 hours Marks 100

Section A:

1. Use the link <http://www.nseindia.com/products/dynaContent/equities/indices/historicalindices.jsp?indexType=NIFTY%20500&fromDate=09-12-2014&toDate=05-11-2015> to send a request to website. Scrape the data and store it in a csv file. (10M)

2. Generate a csv for dates between 1-1-2013 to 1-1-2015. (Hint: Verify the above link and do required changes to get historical data between these dates.) (10M)

3. Get all the company symbols from the resource website:

<http://www.nseindia.com/content/corporate/eq_research_reports_listed.htm>

Download historical data of 365 days for each symbol using python script from the resource website:

<http://www.nseindia.com/products/content/equities/equities/eq_security.htm>

If you cannot write a script to download all, then download physically for first 25 SYMBOLS.

Get the correlation table between each pair symbols on their closing values. (Take the data common to both symbols) (10M)

Section B:

Resource Web Sites:

<http://finance.yahoo.com/q/hp?s=A+Historical+Prices> In this A is the Ticker symbol of **Agilent Technologies Inc. (A)**

<http://en.wikipedia.org/wiki/List_of_S%26P_500_companies> You can get here the list of S&P500 companies.

<http://en.wikipedia.org/wiki/Apple_Inc> (this is an example website of a stock Apple\_Inc details)

1. Get the closing price for each company of S&P 500 for all its available history data. Find a way of parallelizing the downloading the data. (5+5=10M)
2. Identify the top 10 gainers over the downloaded period. (Here gain means average increase of the closing price per day on available historical data) Find out GICS Sector of these 10 gainers. (5+5=10M)
3. Find the stock gain in S&P 500 which has most good linear regression with S&P500INDEX (^GSPC) gain. (Note: Take distinct S&P500INDEX (^GSPC) values. That is if a value is repeated in the last one month; do ignore that for the sake of calculating linear regression.) (10M)
4. Find the correlation between revenue and rank in the top ten gainers. (10M)
5. Find the correlation between the number years the company established and the present rank in the top ten gainers.(10M)
6. Explain which has good correlation among 4 and 5? (10M)
7. Identify the company in terms of gaining most correlated with S&P500INDEX (^GSPC). (10M)