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| CIS 3120: Programming for Analytics  Final Exam Spring 2018 | |
| Kannan Mohan  Department of CIS, Baruch College | Duration: 2 hours  Max points: 100 |

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**Please go to** [**the INSTRUCTIONS**](https://blogs.baruch.cuny.edu/cis3120/deliverables/final-exam-instructions/) **page and read the instructions before proceeding.**

Answer all questions. Use jupyter notebook to write your code. You have to solve these by writing code in python.

1. Get the opening price from yahoo finance for the following stocks: Qualcomm and Intel (ticker symbols are QCOM and INTC) for the period starting 1/1/2017 and ending 12/31/2017. What is the highest, lowest, and average prices for these two stocks over this period? Also, plot the entire dataset in an appropriate plot. Calculate the monthly average of the opening price for QCOM. (25 points)
2. Use this dataset on [[2006 - 2011 NYS Math Test Results By Grade - School Level](https://drive.google.com/file/d/1V96GQ16zhIszDIF3rRZB1k2tNbw-PsDd/view?usp=sharing)] to answer this question. This is from NYC Open Data. Display the average of the mean scale scores grouped by school (DBN) and Grade. (25 points)
3. Use this dataset to answer this question. This is from NYC Open data. This data is [on parking violations in January, February, and March in 2013](https://drive.google.com/file/d/1_2XMdoN5gjdHfOygD4XKtnKox3iIDg9e/view?usp=sharing). Display the top ten Registration States by number of violations. Show this as a plot as well. Plot the top five plate types by number of violations. (25 points)
4. Scrape the website of the Journal of MIS for Volume 34 Number 2 2017 (<http://www.jmis-web.org/issues/135>) to get a list of titles of articles and the first authors published in this issue. Add the article title and first author for all these published articles to a dictionary. Ask the user for keyword(s) they would like to search for. Check if the keyword(s) input by the user exists in any of the titles and display those titles that match the keyword search. Also, list of the first author for that article. (25 points)