Mat 259 Assignment 2 . Spatial Map (2D),
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Concept:

From my first assignment, I observed the variation in the number of Naruto manga/anime checked out every year. In this assignment, I plan to analyze the checkouts for some of the top 10 manga and visualize them in a 2D spatial map. Specifically, I'm interested in observing the trend for every month from 2011-2013 (3 years, 12 months). For every manga, I would end up with a 1-D array of length 36 (12 times 3) and for 10 manga, a 2-D array of width 36 and height 10 (10x36).

The top 20 manga I obtained from the website mangapanda.com is shown below:

1. **Naruto**

2. **Bleach**

3. **One Piece**

4. **Fairy Tail**

5. **Dengeki Daisy**

6. **Skip Beat**

7. **Vampire Knight**

8. **Black Bird**

9. **D Gray Man**

10. **Rosario-Vampire**

Challenge:

In the first assignment, the name *Naruto* was a unique name and I did not have to specify the dewey class while querying. But with names like *Bleach, One Piece* and other common names, the queries are often not comics. So I had to first go and check the dewey classes for the comics. It seems the deweyClass for all comics is 741.5952. A count of all checkouts for this deweyClass got me a total of 934,610 (almost 1 Million!) entries. However, since I'm only interested in some specific manga, I modified the query with the exact deweyClass.
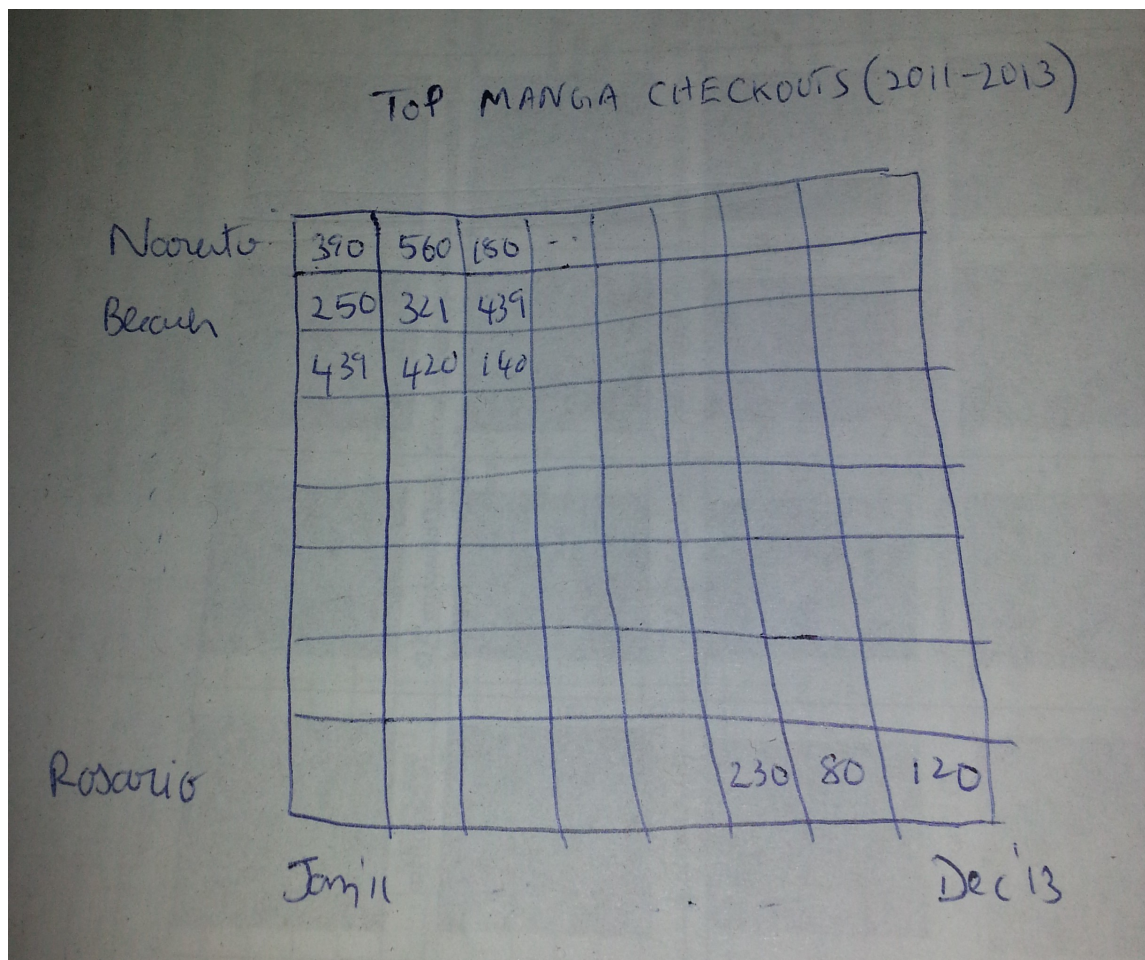
Query:

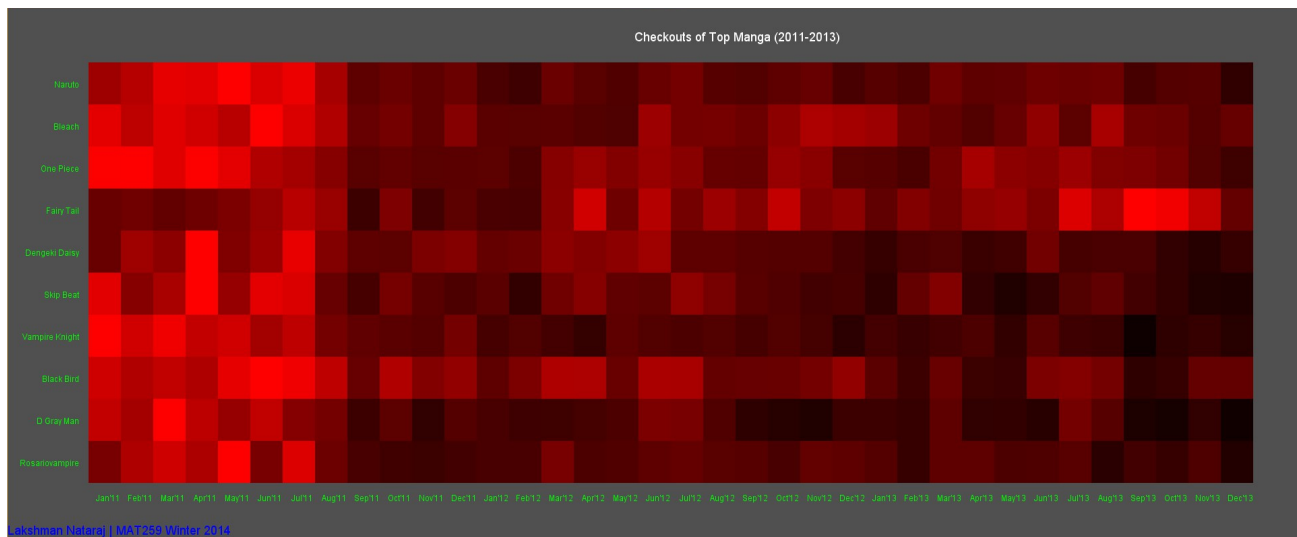A sample query that returns 36 values from Jan 2011 to Dec 2013:

SELECT year(cout),month(cout),count(*) FROM spl2.inraw
where (title like "%rosario%" and itemtype="acbk")

and (year(cout)>="2011" and year(cout)<"2014")
and deweyClass = "741.5952"
group by year(cout),month(cout)
limit 0,1000000;

Doodle:

Final Visualization:

Checkouts of Top Manga (2011-2013)

The top 10 manga are displayed in the 2D Spatial Map along the rows while the columns are the total number of checkouts for the months of Jan 2011 to Dec 2013. The code was based on the sample Processing templates provided in class. The entire code is attached in a zip file.