2019/01/29
IS 590DV
Warm-up:
Harvey's Energy Toll:
1. Method: geographic data/ weather data/database compacity
2. Pro/con: Consider from color/shape/layout/timeline(e.g.: times of rain)/
   overlapping of the circle
3. Error: circle--the area of circle do not have directly positive correlation relationship with the refinery capacity. It should be decided by r^2.

Today's topic:
Data Formats:
1. Text:
   a. ASCII: human readable text.
   b. JSON: flexible, popular online
2. Binary: not human readable, need others to support to read.
   a. CSV: it is not efficient really. It is really easy for python to import. From the first line of the data you could know how the file works. If you do not put value in each file but you need to separate each by the comma.
3. Binary calculation: if you meet the 1 then you add them together, if you meet 0, you could omit it. (google for the calculation)
   a. Word "390": is consisted by 3 bytes and each bytes has 8 bits
   b. https://www.wikihow.com/Convert-from-Decimal-to-Binary if you want to know more how to convert you could google it.
4. HDF5: file hierarchy. Flexible for heavy data format
5. Mutate: Convert one unit to the other unit. During this process, you do not need to shrink the data size etc.
6. Split: Turn your dataset into multiple dataset
7. Nyquist frequency (open the link)
8. Nyquist limitation