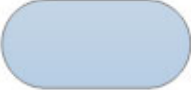

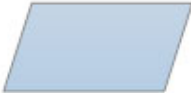




Aesthetic Programming

Class 10- Code and Datafication

Mini exercise8 discussion- Flow Chart

1) Without explaining your code or looking at the source code, can your neighbor understand your program through your flowchart?

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectangle represents a process
	Decision	A diamond indicates a decision

Datafication

investigate and propose actions that push against the limits of today's pervasive quantification of life, work and play

We produce, share, collect, archive, use and misuse, knowingly or not, massive amounts of data, but what does its “capture” do to us?

Datafied research is both a thing and a process, and expresses a complex materiality comprised of assemblages of humans and nonhumans. The politics of data distribution are key here, in understanding how various correlations occur and causation (for a correlation does **not** mean that one thing causes the other).

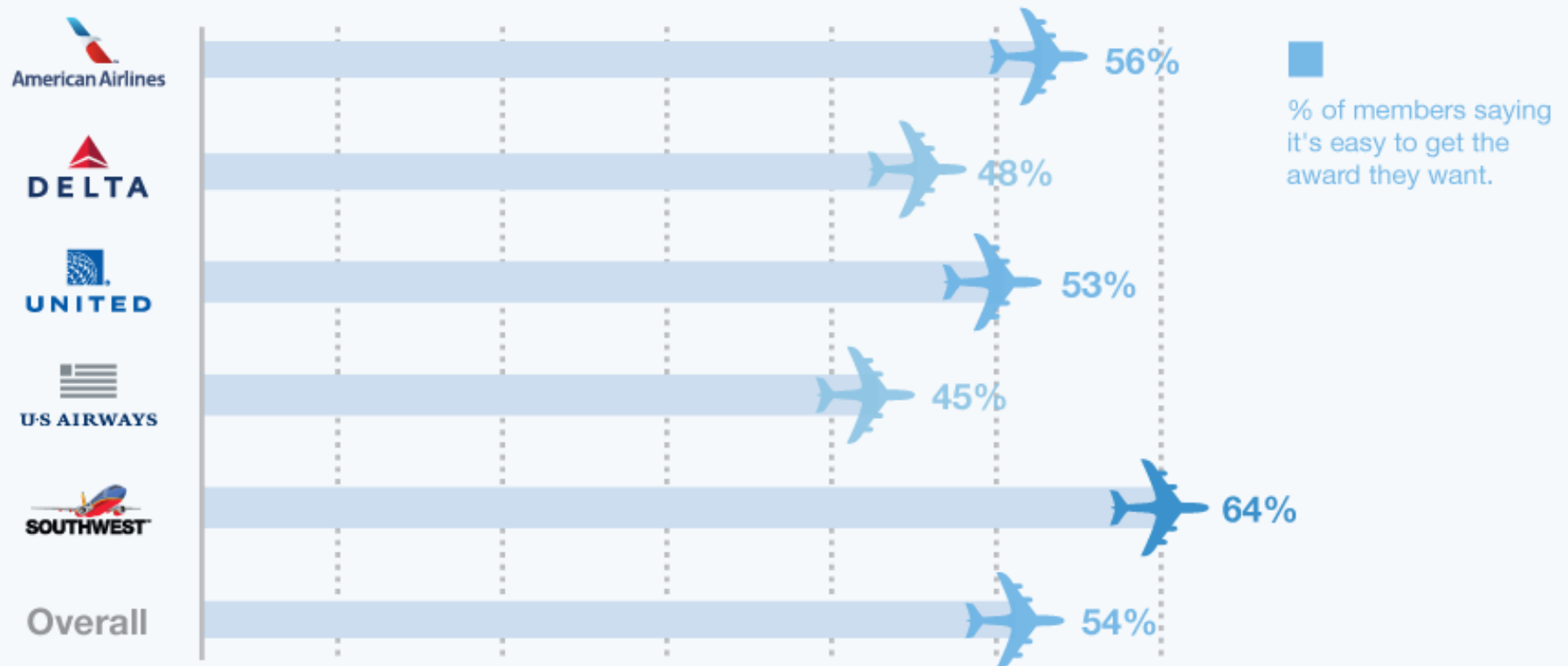
Discussion:

What are the industries or companies that deal with big data? Can you give some examples in the areas of life, work and play? How much do you know what they have captured and how they use our data?

How easy is getting an award?

✓ MileCards.com

Southwest members say it's easiest to get an award



"Data based on an online survey of 1,600 members of U.S. frequent flier programs currently collecting miles for an award trip conducted by Survey Sampling International in December, 2013 with a margin of error of +/- 2%."

amazon

2015

Amazon is the company with the most number of servers

the 1,000,000,000 gigabytes
of big data produced by Amazon from its

152 million customers is stored on
more than 1,400,000 servers in various data centres.

Big Data for fast product iterations to drive user growth

Wouter de Bie

Big Data Architect

@xinit / wouter@spotify.com



September 26, 2014



Mouse tracking on FB

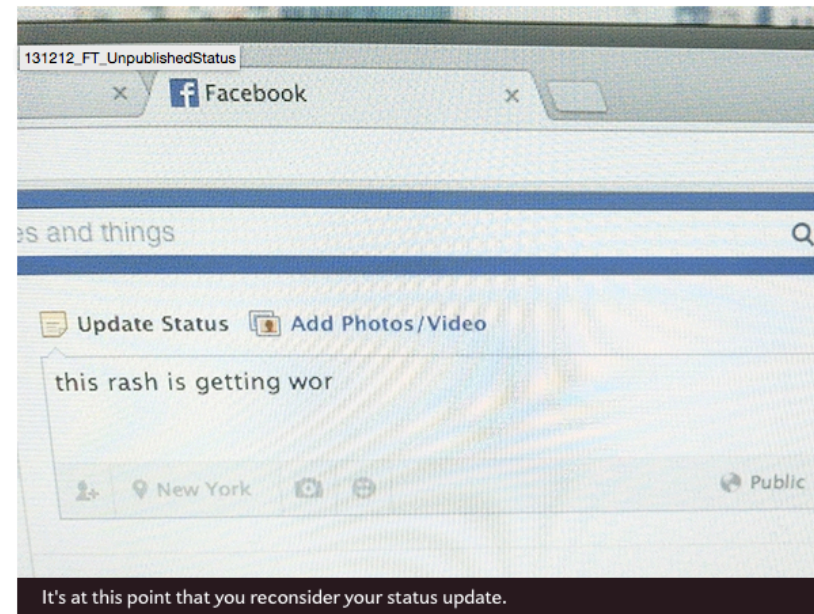
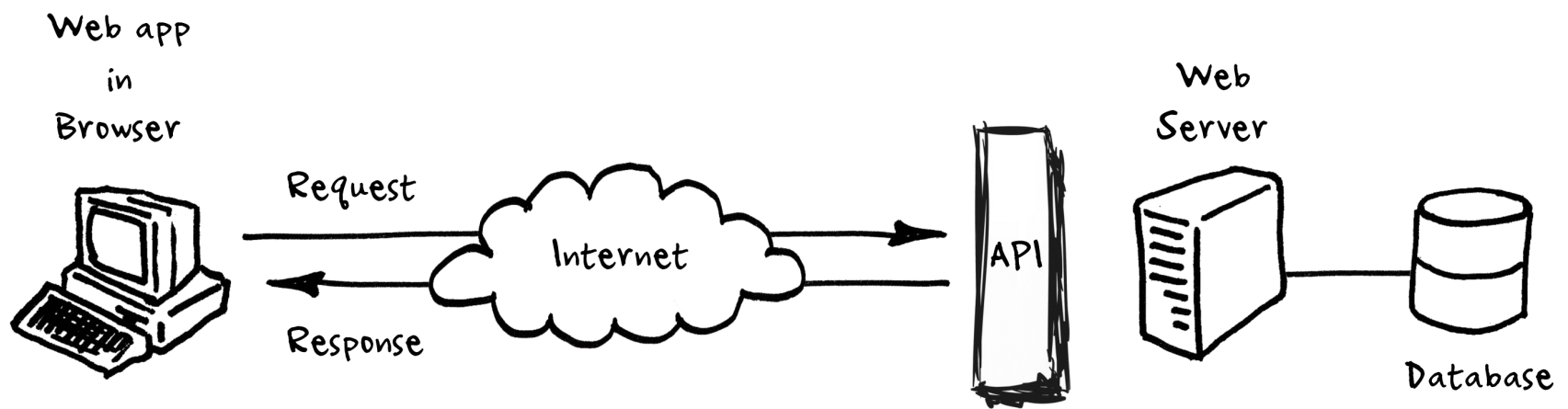


Photo by Slate

API



Web API

- **A**pplication **P**rogramming Interface
- Specifications and protocols that determine relations between software and software
- Communicate between software (for example, your p5.js program and Web 2.0 platforms)

JSON

- JavaScript **O**bject **N**otation
- Data-interchange format
- Two structured types:
 - Objects
 - Arrays

HOW? (API with JSON)

- Study the requirement from data source
- Sign up for the key
- Test with examples
- Study the data fields

Two key functions in JSON

```
{
  "response": {
    "meta": {
      "hits": 16098494,
      "time": 160,
      "offset": 0
    },
    "docs": [
      {
        "web_url": "https://www.nytimes.com/aponline/2017/03/30/world/europe/ap-eu-lithuania-indep-
        endence-act.html",
        "snippet": "A Lithuanian university says a scholar has discovered a missing copy of the Ba
        ltic country's 1918 Independence Act in the archives of Germany's foreign ministry in Berlin...",
        "lead_paragraph": "A Lithuanian university says a scholar has discovered a missing copy of
        the Baltic country's 1918 Independence Act in the archives of Germany's foreign ministry in Berlin
        .",
        "abstract": null,
        "print_page": 0,
        "blog": [],
        "source": "AP",
        "multimedia": [],
        "headline": {
          "main": "Original 1918 Lithuanian Independence Act Found in Germany",
          "print_headline": "Original 1918 Lithuanian Independence Act Found in Germany"
        },
        "keywords": [],
        "pub_date": "2017-03-30T14:06:56+0000",
        "document_type": "article",
        "news_desk": "None",
        "section_name": "World",
        "subsection_name": "Europe",
        "byline": {
          "person": [],
          "original": "By THE ASSOCIATED PRESS",
          "organization": "THE ASSOCIATED PRESS"
        }
      }
    ]
  }
}
```

JSONObject {}

JSONArray []
- An ordered list of values

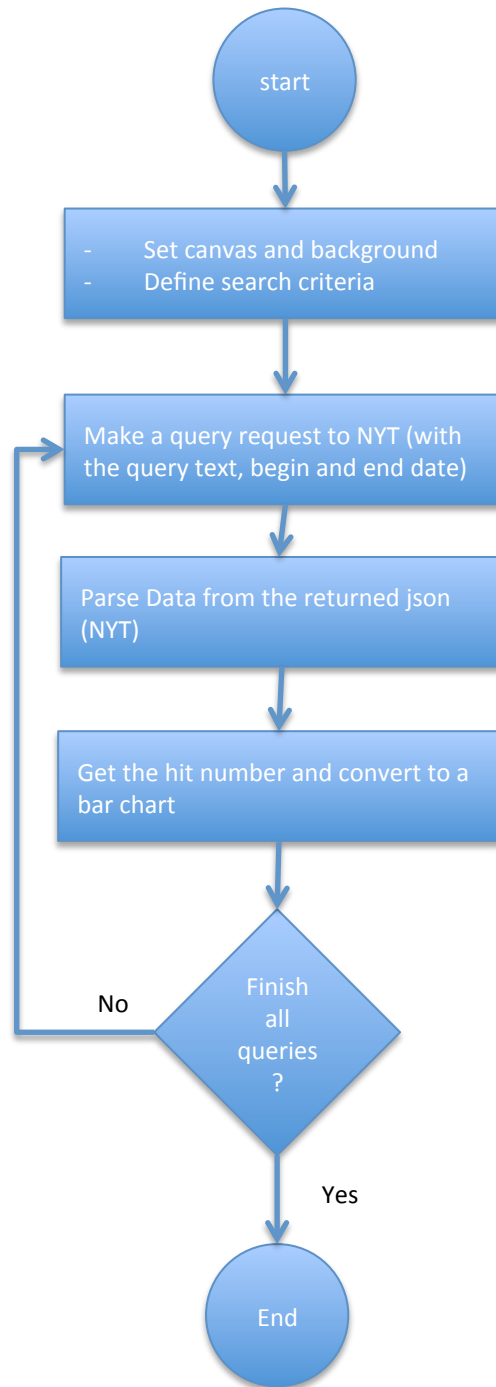
Example: NewYorkTimes

- Apply for the key: <http://developer.nytimes.com/>
- Different types of API: (we use article search API)
http://developer.nytimes.com/article_search_v2.json
- Study the data types:
https://developer.nytimes.com/article_search_v2.json#/Console

NewYorkTimes – JSON API



<http://siusoon.net/test/sketch10/>



loadJSON(request, gotData)

freq = data.response.meta.hits;

```
{
  "response": {
    "meta": {
      "hits": 2077,
      "time": 10,
      "offset": 0
    },
    "docs": [
      {
        "web_url": "https",
        "snippet": "Ever :",
        "lead_paragraph":
        "abstract": null,

```

A red arrow points from the `loadJSON` function name to the `"response"` key in the JSON object. Another red arrow points from the `freq` variable in the code snippet above to the `"hits"` value (`2077`) within the `"meta"` object.

Exercise and Discussion:

Spend sometime with your neighbor to discuss the code (read it carefully esp the comments), then try to download it in your own machine and run the program.

Ex: Data processing - New York Times

- Get different data objects?
- Think about different presentation?
- Think about the whole process: applying id, format of json, text parsing...

Mini_exe9- API (due next week)

+

Final Project