

Review

- The difference between “simple text files” and other binary formatted and compressed files
- Opening and closing files
- Various methods to read file contents
- End-of-line (EOL) markers
- Splitting and joining strings
- Converting strings to numbers
- Removing whitespace
- Building strings with String Interpolation
- The os module, accessing the file system
- Writing files

Jer Thorp. Artist/Educator - NYU

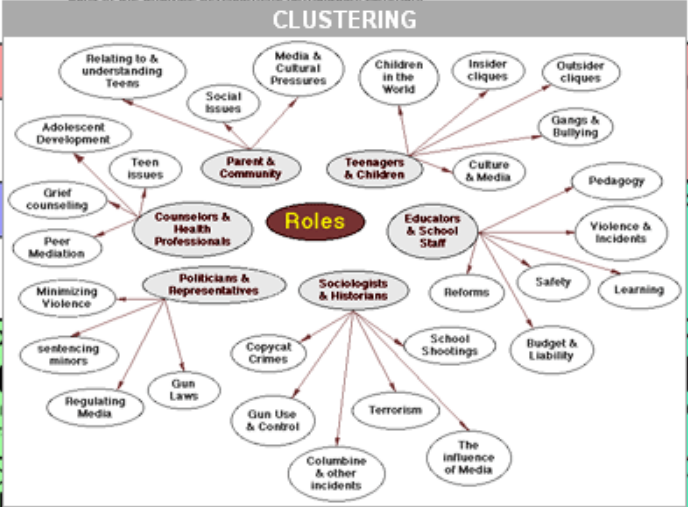
225 "random" numbers chosen and tweeted by 225 people

19	42	42	87	81	99	33	98	61	47	24	66
69	23	67	67	57	71	5	79	57	46	93	54
43	32	18	42	77	37	37	6	93	55	55	77
15	88	42	55	77	42	93	3	17	26	64	65
23	21	9	7	23	17	14	42	45	27	97	83
89	4	4	26	6	39	97	72	35	6	66	
19	2	72	81	37	47	66	17	12	52	74	
54	61	43	19	57	17	77	47	26	72	64	
69	99	64	88	67	1	36	2	60	27	73	
4	43	97	67	42	37	27	1	75	15	17	
13	59	32	78	40	15	64	77	11	1	17	
37	13	7	26	57	25	12	69	8	84	23	
66	42	14	33	17	97	25	57	1	81	97	
8	18	78	12	95	37	84	86	41	56	73	
78	60	21	39	28	17	83	69	12	74	37	
67	19	19	88	96	69	29	74	53	33	72	
32	81	72	72	73	39	52	97	77	77	41	
76	17	69	83	67	64	25	35	42	4	76	
13	36	2	37	52	47	43	25	66	7	6	
87	94	16	28	20	79	23	21	55	66	87	

Examples

- BoxOffice1
- BoxOffice2
- BoxOffice3
- PieSlice
- PieChart1
- PieChart2
- PieChart3
- USMap
- Tuberculosis
- RandomTweets1
- RandomTweets2
- BarTweets1
- BarTweets2
- BarTweets3
- GridTweets1
- GridTweets2

A PERIODIC TABLE OF VISUALIZATION METHODS

C continuum	Data Visualization Visual representations of quantitative data in schematic form (either with or without axes)							Strategy Visualization The systematic use of complementary visual representations in the analysis, development, formulation, communication, and evaluation of ideas, plans, and analyses.							G graphic facilitation				
Tb table	Ga cartesian coordinates	Information Visualization The use of interactive visual representations of data to amplify cognition. This means that the data is transformed into an image, it is mapped to screen space. The image can be changed by users as they proceed working with it.							CLUSTERING 							Tm temple	St story template	Tr tree	Ct cartoon
Pi pie chart	L line chart	Concept Visualization Methods to elaborate (mostly) qualitative concepts, ideas, plans, and analyses.							Cs concept skeleton	Br bridge	Fu funnel	Ri rich picture							
B bar chart	Ac area chart	R radar chart cobweb	Pa parallel coordinates	Hy hyperbolic tree	Cy cycle diagram	T timeline	V venn diagram	Cs concept skeleton	Br bridge	Fu funnel	Ri rich picture								
B bar chart	Ac area chart	R radar chart cobweb	Pa parallel coordinates	Hy hyperbolic tree	Cy cycle diagram	T timeline	V venn diagram	Cs concept skeleton	Br bridge	Fu funnel	Ri rich picture								
Hi histogram	Sc scatterplot	Sa sankey diagram	In information lense	E entity relationship diagram	Pt petri net	Fl flow chart	Cl clustering	Lc layer chart	Py minto pyramid technique	Ce cause-effect chains	Tm toulmin map	Dt decision tree	Cp cpm critical path method	Cf concept fan	Co concept map	Ic iceberg	Lm learning map		
Tk tukey box plot	Sp spectrogram	Da data map	Tp treemap	Cn cone tree	Sy system dyn./ simulation	Df data flow diagram	Se semantic network	So soft system modeling	Sn synergy map	Fo force field diagram	Ib ibis argumentation map	Pr process event chains	Pe pert chart	Ev evocative knowledge map	V vee diagram	Hh heaven 'n' hell chart	I informal		



Process Visualization

Note: Depending on your location and connection speed it can take some time to load a pop-up picture.
© Ralph Lengler & Martin J. Eppler; www.visual-literacy.org

version 1.5

Data Sources

<http://www.data.gov/>

<http://archive.ics.uci.edu/ml/>

<http://opendata.socrata.com/>

<http://www.reddit.com/r/datasets>

Data Source Lists

<http://www.quora.com/Data/Where-can-I-get-large-datasets-open-to-the-public>

[http://www.readwriteweb.com/archives/where to find open data on the.php](http://www.readwriteweb.com/archives/where_to_find_open_data_on_the.php)

Ideas for Visualizations

[http://www.visual-literacy.org/periodic table/periodic table.html](http://www.visual-literacy.org/periodic_table/periodic_table.html)

GapMinder

<http://www.gapminder.org>

<http://www.gapminder.org/videos/hans-rosling-on-cnn-us-in-a-converging-world/>

Hans Rosling

Karolinska Institutet

Stockholm, Sweden