Structuring Data for Analysis Exercise

In groups of 3-4, go to the Largest Vocabulary in Hip Hop visualization, https://pudding.cool/2017/02/vocabulary/index.html, and identify the interactive parts of the visualization that help you analyze the information being presented. What is the message the visualization is trying to communicate? How effective Is the visualization at communicating that message and how does the way the data is structured help? Try to identify the parts the data structure that constitute some analysis of the data by looking at the information below.

The Data

Below is what the data that drives the visualization looks like. The data is stored in what is called an **array** (group of ordered objects separated by commas in []) of **hashes** (collection of keys and values separated by : (name: "Bob") and contained in {}.

DATA
var data = [
{rapper:"Rakim (including Eric B. & Rakim)", x: .4621, r: .45, color: "east nowutang fifth", cluster: 5, words: "4621", id: "rakim", region: "east", cx: 441.828571428571, cy: -21.9535954888632},{rapper:"DMX", x: .3214, r: .45, color: "east nowutang first", cluster: 1, words: "3,214", id: "dmx", region: "east", cx: 80.0285714285715, cy: 0},{rapper:"Too Short", x: .3391, r: .45, color: "west nowutang first", cluster: 1, words: "3,391", id: "too-short", region: "west", cx: 125.542857142857, cy: 0},{rapper:"Drake", x: .3522, r: .45, color: "other nowutang first", cluster: 1, words: "3,522", id: "drake", region: "other", cx: 159.228571428571, cy: -10.2112157120103},{rapper:"50 Cent", x: .3591, r: .45, color: "east nowutang first", cluster: 1, words: "3,591", id: "50-cent", region: "east", cx: 161.8, cy: 24.8941119229515},{rapper:"Bone Thugs-n-Harmony", x: .3547, r: .45, color: "midwest nowutang first", cluster: 1, words: "3,547", id: "bone-thugs", region: "midwest", cx: 165.657142857142, cy: -44.8185811512306},{rapper:"Master P", x: .3612, r: .45, color: "south nowutang second", cluster: 2, words: "3,612", id: "master-p", region: "south", cx:

182.371428571428, cy: 53.4565452889411},{rapper:"Salt-n-Pepa", x: .3612, r: .45, color: "east nowutang second", cluster: 2, words: "3,612", id: "salt-n-pepa", region: "east", cx: 182.371428571428, cy: -75.796459166311},{rapper:"Petey Pablo", x: .3617, r: .45, color: "south nowutang second", cluster: 2, words: "3,617", id: "petey-pablo", region: "south", cx: 183.657142857142, cy: 88.6324349298797},{rapper:"Juvenile", x: .3630, r: .45, color: "south nowutang second", cluster: 2, words: "3,630", id: "juvenile", region: "south", cx: 186.999999999999, cy: -110.690192124918},{rapper:"Young Jeezy", x: .3650, r: .45, color: "south nowutang second", cluster: 2, words: "3,650", id: "jeezy", region: "south", cx: 211.171428571428, cy: -55.5589624521424},{rapper:"Wiz Khalifa", x: .3707, r: .45, color: "midwest nowutang second", cluster: 2, words: "3,707", id: "wiz-khalifa", region: "midwest", cx: 206.799999999999, cy: -20.6320833258752},{rapper:"Lil B", x: .3724, r: .45, color: "west nowutang second", cluster: 2, words: "3,724", id: "lil-b", region: "west", cx: 207.571428571428, cy: 14.5588412316745},{rapper:"Kanye West", x: .3982, r: .45, color: "midwest nowutang second", cluster: 2, words: "3,982", id: "kanye-west", region: "midwest", cx: 254.371428571428, cy: 0},{rapper:"Lil Wayne", x: .3743, r: .45, color: "south nowutang second", cluster: 2, words: "3,743", id: "lil-wayne", region: "south", cx: 230.714285714285, cy: 41.0806141083374},{rapper:"Missy Elliot", x: .3874, r: .45, color: "east nowutang second", cluster: 2, words: "3,874", id: "missy-elliot", region: "east", cx: 249.742857142857, cy: -34.8937329586072},{rapper:"Gucci Mane", x: .3885, r: .45, color: "south nowutang second", cluster: 2, words: "3,885", id: "gucci-mane", region: "south", cx: 252.571428571428, cy: 68.671583271787},{rapper:"2Pac", x: .3970, r: .45, color: "west nowutang second", cluster: 2, words: "3,970", id: "2pac", region: "west", cx: 274.428571428571, cy: 28.9258931351158},{rapper:"Snoop Dogg", x: .3974, r: .45, color: "west nowutang second", cluster: 2, words: "3,974", id: "snoop", region: "west", cx: 275.457142857142, cy: -58.9306167720317},{rapper:"UGK", x: .4011, r: .45, color: "south nowutang third", cluster: 3, words: "4,011", id: "ugk", region: "south", cx: 284.971428571428, cy: -25.0414645164364},{rapper:"Run-D.M.C.", x: .4039, r: .45, color: "east nowutang third", cluster: 3, words: "4,039", id: "run-dmc", region: "east", cx: 292.171428571428, cy: 59.3263420407512},{rapper:"Jadakiss", x: .4108, r: .45, color: "east nowutang third", cluster: 3, words: "4,108", id: "jadakiss", region: "east", cx: 309.914285714285, cy: -51.7402357405128},{rapper:"Scarface", x: .4123, r: .45, color: "south nowutang third", cluster: 3, words: "4,123", id: "scarface", region: "south", cx:

313.771428571428, cy: -4.80396780226788},{rapper:"Insane Clown Posse", x: .4146, r: .45, color: "midwest nowutang third", cluster: 3, words: "4,146", id: "insane-clown-posse", region: "midwest", cx: 319.685714285714, cy: 29.8949874809359},{rapper:"Nicki Minaj", x: .4162, r: .45, color: "east nowutang third", cluster: 3, words: "4,162", id: "nicki-minaj", region: "east", cx: 323.8, cy: 74.7739872543018},{rapper:"T.I.", x: .4151, r: .45, color: "south nowutang third", cluster: 3, words: "4,151", id: "t-i-", region: "south", cx: 337.428571428571, cy: -73.6938312293761},{rapper:"Geto Boys", x: .4180, r: .45, color: "south nowutang fourth", cluster: 4, words: "4,180", id: "geto-boys", region: "south", cx: 339.999999999999, cy: -33.4687807033694},{rapper:"Three 6 Mafia", x: .4225, r: .45, color: "south nowutang fourth", cluster: 4, words: "4,225", id: "three-six-mafia", region: "south", cx: 339.999999999999, cy: 106.023887626238},{rapper:"Biz Markie", x: .4313, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,313", id: "biz-markie", region: "east", cx: 376.971428571428, cy: -29.4693486275054},{rapper:"Ice Cube", x: .4371, r: .45, color: "west nowutang fourth", cluster: 4, words: "4,371", id: "ice-cube", region: "west", cx: 377.542857142857, cy: 6.537},{rapper:"Cam'ron", x: .4406, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,406", id: "camron", region: "east", cx: 377.542857142857, cy: -64.5746762624673},{rapper:"Nelly", x: .4413, r: .45, color: "south nowutang fourth", cluster: 4, words: "4,413", id: "nelly", region: "south", cx: 388.342857142857, cy: 72.0389255895792},{rapper:"Puff Daddy", x: .4429, r: .45, color: "east nowutang default fourth", cluster: 4, words: "4,429", id: "puff-daddy", region: "east", cx: 392.457142857142, cy: -96.4582199000343},{rapper:"The Game", x: .4416, r: .45, color: "west nowutang fourth", cluster: 4, words: "4,416", id: "game", region: "west", cx: 389.114285714285, cy: 107.229850147129},{rapper:"Royce da 5'9", x: .4430, r: .45, color: "midwest nowutang fourth", cluster: 4, words: "4,430", id: "royce-da-5-9", region: "midwest", cx: 392.714285714285, cy: -131.656659507593},{rapper:"Ice T", x: .4431, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,431", id: "ice-t", region: "east", cx: 409.428571428571, cy: -49.6650318084311},{rapper:"Lupe Fiasco", x: .4439, r: .45, color: "midwest nowutang fourth", cluster: 4, words: "4,439", id: "lupe-fiasco", region: "midwest", cx: 395.028571428571, cy: 141.928805430332},{rapper:"Eminem", x: .4494, r: .45, color: "midwest nowutang fourth", cluster: 4, words: "4,494", id: "eminem", region: "midwest", cx: 409.171428571428, cy: -162.771908538182},{rapper:"Jay-Z", x: .4506, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,506", id: "jay-z", region:

"east", cx: 412.257142857142, cy: 44.3609672462489},{rapper:"Clipse", x: .4514, r: .45, color: "south nowutang fourth", cluster: 4, words: "4,514", id: "clipse", region: "south", cx: 414.314285714285, cy: 0},{rapper:"Cypress Hill", x: .4568, r: .45, color: "west nowutang fourth", cluster: 4, words: "4,568", id: "cypress-hill", region: "west", cx: 428.199999999999, cy: -133.159246674653},{rapper:"KRS-One (only solo albums, excl. boogie productions)", x: .4585, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,585", id: "krs-one-excl-boogie-production", region: "east", cx: 432.571428571428, cy: -98.2323675483859},{rapper:"Tyga", x: .4601, r: .45, color: "west nowutang fifth", cluster: 5, words: "4,601", id: "tyga", region: "west", cx: 436.685714285714, cy: 69.7034448523388},{rapper:"Brand Nubian", x: .4609, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,609", id: "brand-nubian", region: "east", cx: 438.742857142857, cy: 104.842659933516},{rapper:"Mos Def", x: .4630, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,630", id: "mos-def", region: "east", cx: 444.142857142857, cy: -64.9893485207418},{rapper:"A Tribe Called Quest", x: .4635, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,635", id: "tribe-called-quest", region: "east", cx: 445.428571428571, cy: 16.4589640544529},{rapper:"Fat Joe", x: .4686, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,686", id: "fat-joe", region: "east", cx: 458.542857142857, cy: 133.945173111178},{rapper:"Brother Ali", x: .4700, r: .45, color: "midwest nowutang fifth", cluster: 5, words: "4,700", id: "brother-ali", region: "midwest", cx: 462.142857142857, cy: -123.83837105937},{rapper:"Lil' Kim", x: .4474, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,474", id: "lil-kim", region: "east", cx: 384.999999999999, cy: 175.669345265344},{rapper:"Public Enemy", x: .4481, r: .45, color: "east nowutang fourth", cluster: 4, words: "4,481", id: "public-enemy", region: "east", cx: 436.428571428571, cy: 161.330472828416},{rapper:"Talib Kweli", x: .4703, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,703", id: "talib-kweli", region: "east", cx: 462.914285714285, cy: -159.02929561692},{rapper:"Twista", x: .4705, r: .45, color: "midwest nowutang fifth", cluster: 5, words: "4,705", id: "twista", region: "midwest", cx: 474.999999999999, cy: -91.0711595392088},{rapper:"LL Cool J", x: .4743, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,743", id: "ll-cool-j", region: "east", cx: 473.199999999999, cy: -45.1228258699209},{rapper:"Mobb Deep (incl. both Prodigy and Havoc)", x: .4756, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,756", id: "mobb-deep", region: "east", cx: 483.742857142857, cy: -11.5394306198678},{rapper:"Big Daddy Kane", x: .4768, r: .45, color: "east

nowutang fifth", cluster: 5, words: "4,768", id: "big-daddy-kane", region: "east", cx: 485.285714285714, cy: 23.6261187870831},{rapper:"Ludacris", x: .4806, r: .45, color: "south nowutang fifth", cluster: 5, words: "4,806", id: "ludacris", region: "south", cx: 489.4, cy: 58.5842212286804},{rapper:"Gang Starr", x: .4794, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,794", id: "gang-starr", region: "east", cx: 486.314285714285, cy: 93.6480863978673},{rapper:"Goodie Mob", x: .4814, r: .45, color: "south nowutang fifth", cluster: 5, words: "4,814", id: "goodie-mob", region: "south", cx: 491.457142857142, cy: 146.420992490055},{rapper:"Tech n9ne", x: .4830, r: .45, color: "midwest nowutang fifth", cluster: 5, words: "4,830", id: "tech-nine", region: "midwest", cx: 511.91, cy: -114.03},{rapper:"Busta Rhymes", x: .4839, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,839", id: "busta-rhymes", region: "east", cx: 503.285714285714, cy: -70.1208697893528},{rapper:"Wale", x: .4896, r: .45, color: "east nowutang fifth", cluster: 5, words: "4,896", id: "wale", region: "east", cx: 512.542857142857, cy: -36.160575630167},{rapper:"De La Soul", x: .4933, r: .45, color: "east nowutang sixth", cluster: 6, words: "4,933", id: "de-la-soul", region: "east", cx: 522.057142857142, cy: -2.27142337457176},{rapper:"Method Man (only solo albums)", x: .4951, r: .45, color: "east wutang sixth", cluster: 6, words: "4,951", id: "method-man", region: "east", cx: 526.685714285714, cy: 32.6223095840354},{rapper:"Common", x: .4974, r: .45, color: "midwest nowutang sixth", cluster: 6, words: "4,974", id: "common", region: "midwest", cx: 532.599999999999, cy: 67.3212648672393},{rapper:"Xzibit", x: .4982, r: .45, color: "west nowutang sixth", cluster: 6, words: "4,982", id: "xzibit", region: "west", cx: 534.657142857142, cy: -86.0842573572765},{rapper:"Raekwon (only solo albums)", x: .5001, r: .45, color: "east wutang sixth", cluster: 6, words: "5,001", id: "raekwon", region: "east", cx: 539.542857142857, cy: 101.829133650313},{rapper:"Das EFX", x: .5005, r: .45, color: "east nowutang sixth", cluster: 6, words: "5,005", id: "das-efx", region: "east", cx: 557.285714285714, cy: -59.1223577884772},{rapper:"Beastie Boys", x: .5090, r: .45, color: "east nowutang sixth", cluster: 6, words: "5,090", id: "beastie-boys", region: "east", cx: 562.428571428571, cy: -24.3007080046984},{rapper:"Nas", x: .5096, r: .45, color: "east nowutang sixth", cluster: 6, words: "5,096", id: "nas", region: "east", cx: 563.971428571428, cy: 10.8648414022526},{rapper:"MF DOOM", x: .5204, r: .45, color: "east nowutang sixth", cluster: 6, words: "5,204", id: "mf-doom", region: "east", cx: 603.571428571428, cy: 0},{rapper:"E-40", x: .5207, r: .45, color: "west nowutang sixth", cluster: 6, words: "5,207", id: "e-40", region: "west", cx: 592.514285714285, cy: 33.4175981347061},{rapper:"Outkast",

x: .5212, r: .45, color: "south nowutang sixth", cluster: 6, words: "5,212", id: "outkast", region: "south", cx: 593.8, cy: -40.2640955726219},{rapper:"Redman", x: .5331, r: .45, color: "east nowutang sixth", cluster: 6, words: "5,331", id: "redman", region: "east", cx: 624.4, cy: 48.3272425887428},{rapper:"Kool G Rap", x: .5394, r: .45, color: "east nowutang sixth", cluster: 6, words: "5,394", id: "kool-g-rap", region: "east", cx: 640.599999999999, cy: 17.0773422168059},{rapper:"Blackalicious", x: .5480, r: .45, color: "west nowutang sixth", cluster: 6, words: "5,480", id: "blackalicious", region: "west", cx: 662.714285714285, cy: -10.3079575004312},{rapper:"Killah Priest", x: .5737, r: .45, color: "east nowutang seventh", cluster: 7, words: "5,737", id: "killah-priest", region: "east", cx: 728.8, cy: 0},{rapper:"Ghostface Killah (only solo albums)", x: .5774, r: .45, color: "east wutang seventh", cluster: 7, words: "5,774", id: "ghostface-killah", region: "east", cx: 738.314285714285, cy: -33.8891522555953},{rapper:"Roots", x: .5803, r: .45, color: "east nowutang seventh", cluster: 7, words: "5,803", id: "roots", region: "east", cx: 745.771428571428, cy: 33.8377509799414},{rapper:"Wu-Tang Clan", x: .5895, r: .45, color: "east wutangseventh", cluster: 7, words: "5,895", id: "wu-tang", region: "east", cx: 765.628571, cy: 0},{rapper:"RZA (only solo albums)", x: .5905, r: .45, color: "east wutangseventh", cluster: 7, words: "5,905", id: "rza", region: "east", cx: 785.77, cy: 33.837},{rapper:"CunninLynguists", x: .5971, r: .45, color: "south nowutang seventh", cluster: 7, words: "5,971", id: "cunninlynguists", region: "south", cx: 803.971429, cy: 0},{rapper:"Canibus", x: .5991, r: .45, color: "east nowutang seventh", cluster: 7, words: "5,991", id: "canibus", region: "east", cx: 807.114286, cy: -34.8216497837788},{rapper:"Kool Keith", x: .6238, r: .45, color: "east nowutang seventh", cluster: 7, words: "6,238", id: "kool-keith", region: "east", cx: 842, cy: 0},{rapper:"GZA (only solo albums)", x: .6426, r: .45, color: "east wutang seventh", cluster: 7, words: "6,426", id: "gza", region: "east", cx: 880, cy: 0},{rapper:"Aesop Rock", x: .7392, r: .45, color: "east nowutang seventh", cluster: 7, words: "7,392", id: "aesop", region: "east", cx: 930.623, cy: 0}
];