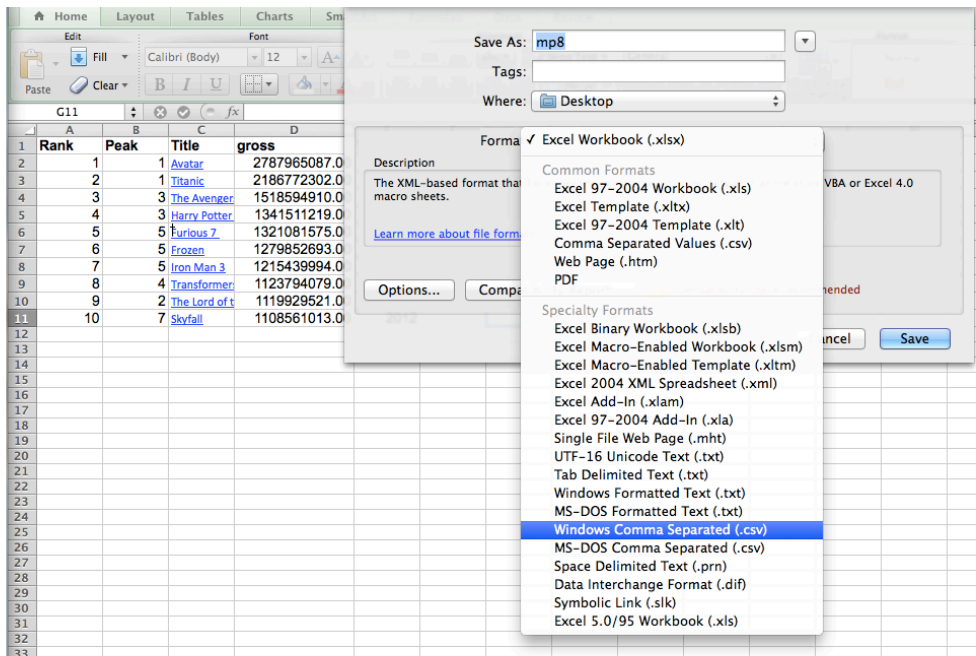


1. Find a data set from the internet

ms still playing in theaters around the world in the week commencing 24 April 2015.

Rank	Peak	Title	Worldwide gross	Year	Reference(s)
1	1	<i>Avatar</i>	\$2,787,965,087	2009	[# 1][# 2]
2	1	<i>Titanic</i>	\$2,186,772,302	1997	[# 3][# 4]
3	3	<i>The Avengers</i>	\$1,518,594,910	2012	[# 5][# 6]
4	3	<i>Harry Potter and the Deathly Hallows – Part 2</i>	\$1,341,511,219	2011	[# 7][# 8]
5	5	<i>Furious 7</i> †	\$1,321,081,575	2015	[# 9]
6	5	<i>Frozen</i>	\$1,279,852,693	2013	[# 10][# 11]
7	5	<i>Iron Man 3</i>	\$1,215,439,994	2013	[# 12][# 13]
8	4	<i>Transformers: Dark of the Moon</i>	\$1,123,794,079	2011	[# 14][# 8]
9	2	<i>The Lord of the Rings: The Return of the King</i>	\$1,119,929,521	2003	[# 15][# 16]
10	7	<i>Skyfall</i>	\$1,108,561,013	2012	[# 17][# 18]
11	10	<i>Transformers: Age of Extinction</i>	\$1,091,405,097	2014	[# 19][# 20]
12	7	<i>The Dark Knight Rises</i>	\$1,084,439,099	2012	[# 21][# 22]
13	3	<i>Pirates of the Caribbean: Dead Man's Chest</i>	\$1,066,179,725	2006	[# 23][# 24]
14	5	<i>Toy Story 3</i>	\$1,063,171,911	2010	[# 25][# 26]
15	6	<i>Pirates of the Caribbean: On Stranger Tides</i>	\$1,045,713,802	2011	[# 27][# 28]
16	1	<i>Jurassic Park</i>	\$1,029,939,903	1993	[# 29][# 30]
17	2	<i>Star Wars Episode I: The Phantom Menace</i>	\$1,027,044,677	1999	[# 31][# 4]
18	5	<i>Alice in Wonderland</i>	\$1,025,467,110	2010	[# 32][# 33]
19	14	<i>The Hobbit: An Unexpected Journey</i>	\$1,017,003,568	2012	[# 34][# 35]
20	4	<i>The Dark Knight</i>	\$1,004,558,444	2008	[# 36][# 37]

2. Copy-paste it to excel and edit it, then save it as .csv file



3. Open your .csv file with txt editor, then copy-paste it to JSON Data Converter. After that, you will get an array as output. (https://courses.engr.illinois.edu/cs105/data_convert/)

CSV to JSON Data Converter

Use this tool to convert CSV (Excel) data into JSON data for use in a d3.js visualization

Input: CSV Data

Paste in CSV formatted data to automatically convert it to JSON ready for d3.js

```
1,1,Avatar,2787965087.00,2009
2,1,Titanic,2186772302.00,1997
3,3,The Avengers,1518594910.00,2012
4,3,Harry Potter and the Deathly Hallows ñ Part 2,1341511219.00,2011
5,5,Furious 7†,1321081575.00,2015
6,5,Frozen,1279852693.00,2013
7,5,Iron Man 3,1215439994.00,2013
8,4,Transformers: Dark of the Moon,1123794079.00,2011
9,2,The Lord of the Rings: The Return of the King,1119929521.00,2003
10,7,Skyfall,1108561013.00,2012
```

Output: JSON, as an Array so Objects

Copy and paste this output into data.js. You can make sure to get all the data by clicking inside of the text area, pressing Ctrl+A to select everything, and then Ctrl+C to copy it.

```
var data = [{"rank":1,"peak":1,"title":"Avatar","gross":2787965087.00,"year":2009},
{"rank":2,"peak":1,"title":"Titanic","gross":2186772302.00,"year":1997},
{"rank":3,"peak":3,"title":"The Avengers","gross":1518594910.00,"year":2012},
{"rank":4,"peak":3,"title":"Harry Potter and the Deathly Hallows ñ Part 2","gross":1341511219.00,"year":2011},
{"rank":5,"peak":5,"title":"Furious 7†","gross":1321081575.00,"year":2015},
{"rank":6,"peak":5,"title":"Frozen","gross":1279852693.00,"year":2013},
{"rank":7,"peak":5,"title":"Iron Man 3","gross":1215439994.00,"year":2013},
{"rank":8,"peak":4,"title":"Transformers: Dark of the Moon","gross":1123794079.00,"year":2011},
{"rank":9,"peak":2,"title":"The Lord of the Rings: The Return of the King","gross":1119929521.00,"year":2003},
{"rank":10,"peak":7,"title":"Skyfall","gross":1108561013.00,"year":2012}];
```

4. Paste your output array to jsfiddle and then draw a circle! (<https://jsfiddle.net/wadefagen/g9q5z0bn/>)


The screenshot shows a jsfiddle editor with the following code in the JavaScript pane:

```
4 [{"rank":4,"peak":3,"title":"Harry Potter and the Deathly
Hallows ñ Part 2","gross":1341511219.00,"year":2011},
5 [{"rank":5,"peak":5,"title":"Furious
7†","gross":1321081575.00,"year":2015},
6 [{"rank":6,"peak":5,"title":"Frozen","gross":1279852693.00,"year
":2013},
7 [{"rank":7,"peak":5,"title":"Iron Man
3","gross":1215439994.00,"year":2013},
8 [{"rank":8,"peak":4,"title":"Transformers: Dark of the
Moon","gross":1123794079.00,"year":2011},
9 [{"rank":9,"peak":2,"title":"The Lord of the Rings: The Return
of the King","gross":1119929521.00,"year":2003},
10 [{"rank":10,"peak":7,"title":"Skyfall","gross":1108561013.00,"ye
ar":2012}];
11
12 var width = 300, height = 400;
13
14 var chart = d3.select("#chart")
15   .append("svg")
16   .attr("width", width)
17   .attr("height", height);
18
19 chart.selectAll("circle")
20   .data( data )
21   .enter()[[{"rank":6, "peak":5, "title":"Frozen", "gross":
1279852693.00, "year":2013}
22   .append("circle")
23   .attr("cx", 0)
24   .attr("cy", 0)
25   .attr("r", 100)
26   .attr("fill", "blue");
27
```

The visualization pane shows a blue circle drawn in the top-left corner of a 300x400 chart area. The circle is centered at (0,0) with a radius of 100. A "Result" button is visible in the top right of the visualization pane.

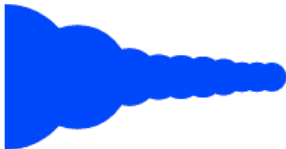
5. Change your parameter to change the figure.

```
7↑", "gross":1321081575.00, "year":2015},
6 {"rank":6, "peak":5, "title": "Frozen", "gross":1279852693.00, "year":2013},
7 {"rank":7, "peak":5, "title": "Iron Man
3", "gross":1215439994.00, "year":2013},
8 {"rank":8, "peak":4, "title": "Transformers: Dark of the
Moon", "gross":1123794079.00, "year":2011},
9 {"rank":9, "peak":2, "title": "The Lord of the Rings: The Return
of the King", "gross":1119929521.00, "year":2003},
10 {"rank":10, "peak":7, "title": "Skyfall", "gross":1108561013.00, "year":2012}];
11
12 var width = 300, height = 400;
13
14 var chart = d3.select("#chart")
15   .append("svg")
16   .attr("width", width)
17   .attr("height", height);
18
19 chart.selectAll("circle")
20   .data( data )
21   .enter().each(function(d) {
22     .append("circle")
23     .attr("cx", 0)
24     .attr("cy", height/2)
25     .attr("r", 100)
26     .attr("fill", "blue");
27
```

A blue semi-circle is displayed on the right side of the code editor. It is positioned vertically in the center of the editor's height. The semi-circle is filled with a solid blue color and has a smooth, curved edge on the right side, while the left side is flat, representing the y-axis of a chart.

Or do something interesting by adding functions!

```
of the King", "gross":1119929521.00, "year":2003},
10 {"rank":10, "peak":7, "title": "Skyfall", "gross":1108561013.00, "year":2012}];
11
12 var width = 300, height = 400;
13
14 var grossScale = d3.scale.linear()
15   .domain( [data[0].gross, data[9].gross] )
16   .range( [50, 10] );
17
18 var chart = d3.select("#chart")
19   .append("svg")
20   .attr("width", width)
21   .attr("height", height);
22
23 chart.selectAll("circle")
24   .data( data )
25   .enter().each(function(d) {
26     .append("circle")
27     .attr("cx", function (d,i){
28       var x = 0;
29       for (var j=0; j<i; j++)
30         x+= grossScale(data[j].gross);
31       return x;
32     })
33     .attr("cy", height/2)
34     .attr("r", function (d,i){
35       return grossScale(d.gross);
36     })
37     .attr("fill", "blue");
38
```

A blue chart is displayed on the right side of the code editor. It consists of a series of circles of varying radii and positions. The circles are arranged in a horizontal line, with the largest circle on the left and the smallest on the right. The radii of the circles decrease as they move from left to right, and their horizontal positions are determined by the cumulative gross values of the movies. The circles are filled with a solid blue color.