

To understand D3, imagine ninjas

Or, rather, a play about ninjas



A NINJA requires two things



**Actor + costume =
NINJA**

3 costumes + 3 actors = 3 ninjas



+



=



Costumes + Actors = NINJAS

A NINJA requires two things



**Actor only
= NO NINJA**

Costume only = no ninja



**Costume only
= NO NINJA**

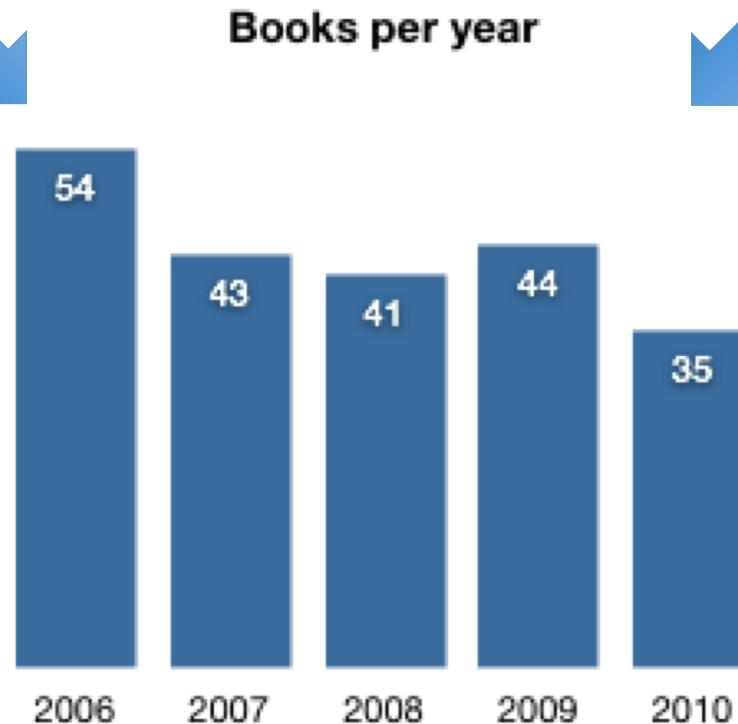
A NINJA requires two things



**Actor + Costume
= NINJA**

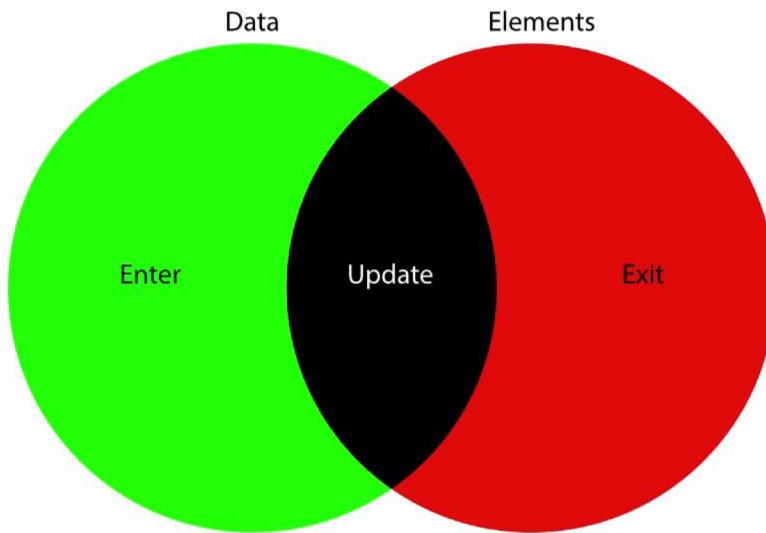
D3 charts are like ninjas

```
var books = [  
  {2006:54},  
  {2007:43},  
  {2008:41},  
  {2009:44},  
  {2010:35}  
];
```



Enter(), Exit(), Update()

DATA JOINS



Unbound data produces the enter selection, which represents missing elements.

Data points joined to existing elements produce the update selection.

Enter() selection



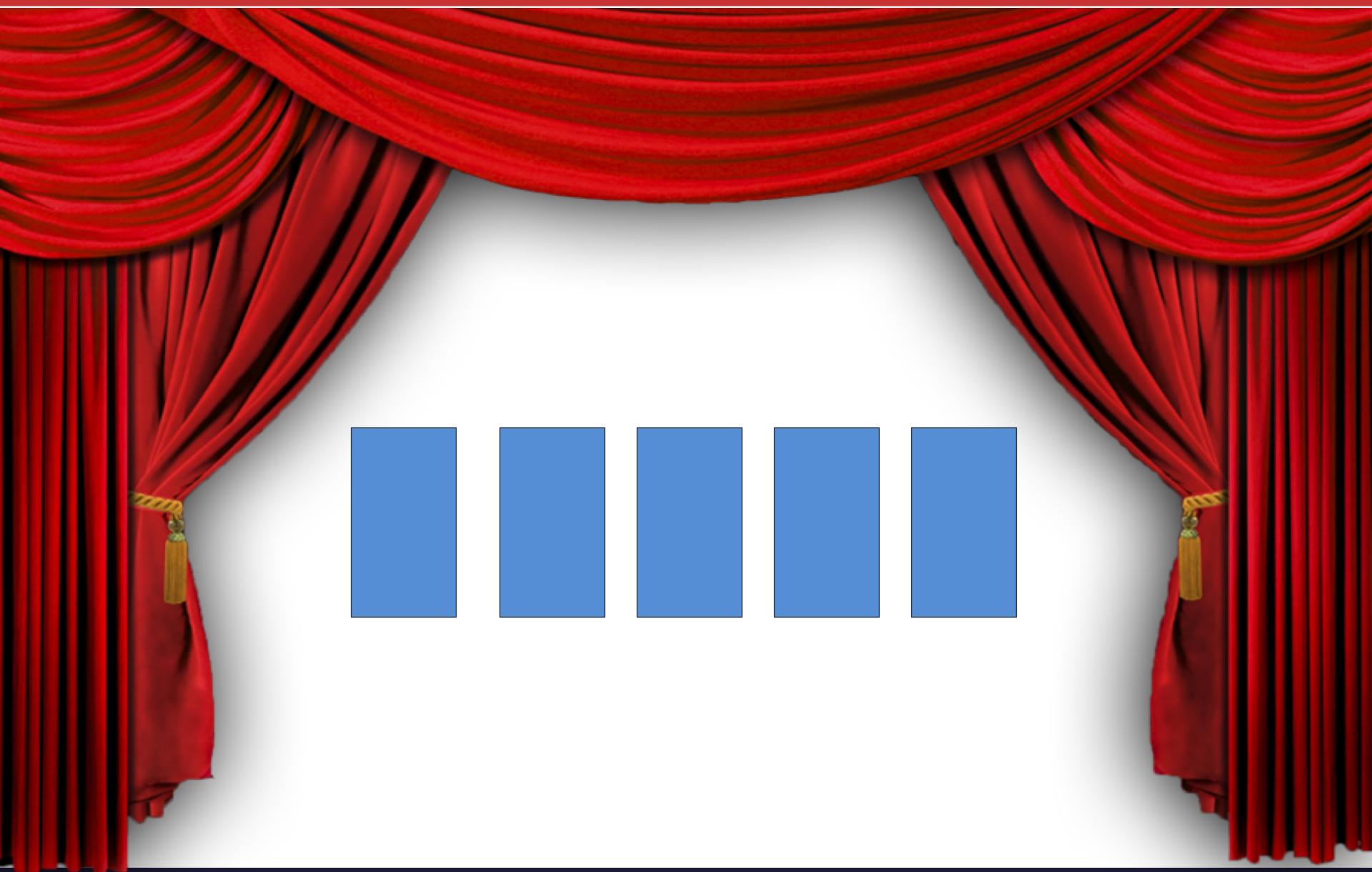
Enter() selection

```
var books = [  
  {2006:54},  
  {2007:43},  
  {2008:41},  
  {2009:44},  
  {2010:35}  
];
```

Exit() selection



Exit() selection



Bringing it all together

```
svg.selectAll("rect")
  .data(booksReadThisYear)
  .enter().append("rect")
  .attr("width", 50)
```