Announcements

- Easy URL for website: datascienceforall.org
  - Videos!
  - Demos!
  - Interactive textbook!
- Lab 02 available tonight
- HW 01 due Thursday (bonus point for early submission)
- Need Vocareum access? Fill out Google form at bottom of website
Top Box Office Hit

The highest grossing movie of all time is:

- Avatar
- Jaws
- Titanic
- Star Wars: A New Hope
- Star Wars: The Force Awakens
Names
Assignment Statements

- Statements don't have a value; they perform an action
- An assignment statement changes the meaning of the name to the left of the = symbol
- The name is bound to a value (not an equation)

hours_per wk = 24*7
Call Expressions
Anatomy of a Call Expression

"Call f on 27."
Anatomy of a Call Expression

max (15, 27)

- What function to call
- First argument
- Second argument
Tables
Table Structure

- We organize our data in tables
- A Table is a sequence of labeled columns
- Data within a column should be of the same "type"

<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>CA</td>
<td>163696</td>
</tr>
<tr>
<td>Nevada</td>
<td>NV</td>
<td>110567</td>
</tr>
</tbody>
</table>

(Demo)
Table Operations

- `t.select(label)` - constructs a new table with just the specified columns
- `t.sort(label)` - constructs a new table, with rows sorted by the specified column

(Demo)
Visualization

- `t.barh(label)` - horizontal bar chart with specified column as the y-axis categories (Demo)
Table Operations

- \( t\.where(label, condition) \) - constructs a new table with just the rows that match the condition

(Demo)