Lecture 3

Tables
Announcements
Programming Languages

- Python is popular both for data science & general software development
- Mastering the language fundamentals is critical
- Learn through practice, not by reading or listening
- Follow along: summer.datahub.berkeley.edu

(Demo)
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)

(Demo)
Call Expressions
Anatomy of a Call Expression

What function to call

Argument to the function

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

max ( 15 , 27 )

What function to call
First argument
Second argument

(Demo)
Tables
Table Structure

- A Table is a sequence of labeled columns
- Each row represents one individual
- Data within a column represents one attribute of the individuals

<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>
Some Table Operations

- `t.select(label)` - constructs a new table with just the specified columns
- `t.drop(label)` - constructs a new table in which the specified columns are omitted
- `t.sort(label)` - constructs a new table with rows sorted by the specified column
- `t.where(label, condition)` - constructs a new table with just the rows that match the condition
Discussion Question

**nba** table:

How to display just the row corresponding to the player who had the highest salary?