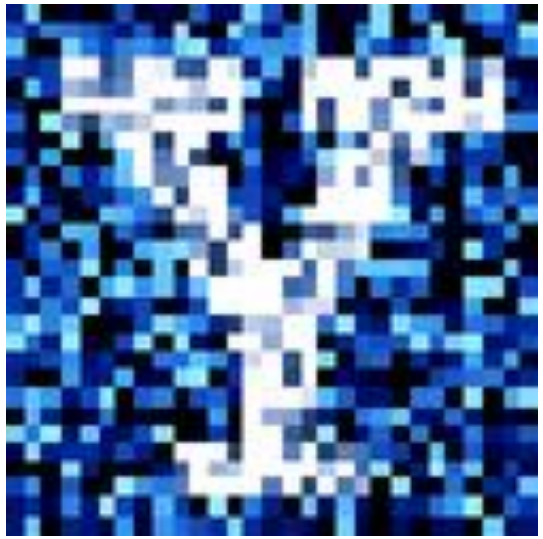
YData: Introduction to Data Science



Lecture 06: Tables continued

Overview

Review and continuation of Tables

Lists

Census Data

Announcements

Homework 2 has been posted, It is due on Sunday February 13th at 11pm

Practice 2 exercises have also been posted

- These are not turned in but will be useful to complete to gain more Python practice

Any questions about anything?

Review of Tables

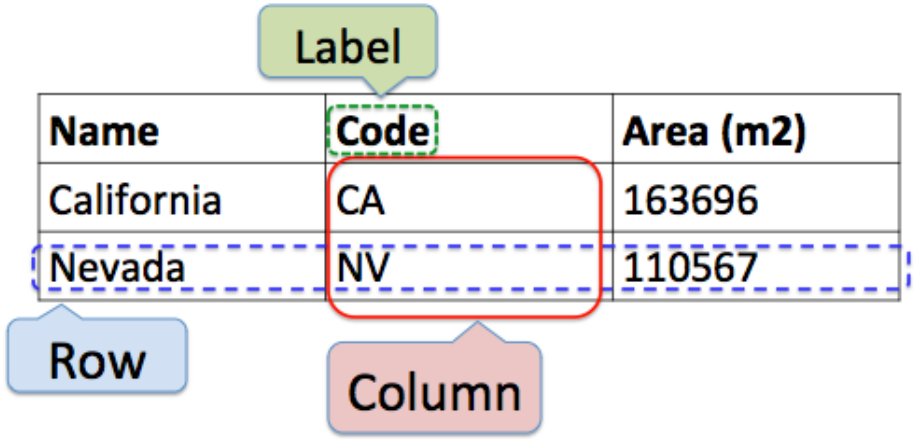
Review: Table Methods

tb.select(label) - constructs a new table with just the specified columns

tb.drop(label) - constructs a new table in which the specified columns are omitted

tb.sort(label) - constructs a new table with rows sorted by the specified column

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



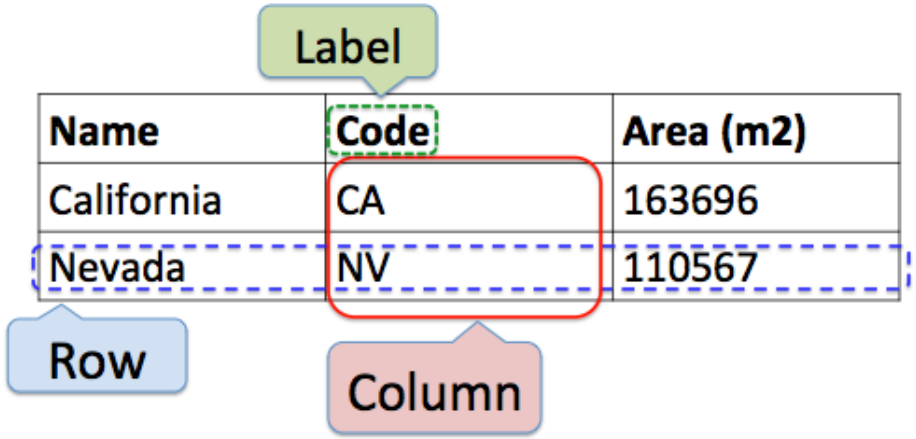
Additional Table Methods and Properties

tb.num_rows – returns the number of rows

tb.num_columns– returns the number of columns

relabel('column_name', 'new_name') - constructs a new table where 'column_name' has been renamed to 'new_name'

tb.take(numbers) - constructs a new table with just the row numbers specified



See Berkeley's documentation

Let's explore this in Jupyter!

Lists

Lists are Generic Sequences

Lists are one of the most widely used data types in Python

A list is a sequence of values (like an array), but the values can all have different types:

```
[3, 21.3, "unicorn"]
```

Lists can be used to create table rows, and for many other things!

Let's explore this in Jupyter!

Constructing Tables

Creating Tables

We can create tables by:

- Constructing a new Table using the Table() construction
- Adding columns using themethod
- tb.with_columns('name', array)

Let's construct a Table specifying how far different streets are from our classroom

Census Data

Census Data

Every ten years, the Census Bureau counts how many people there are in the U.S.

- Rich data set that can be used to explore demographic trends

Information about the data from the codebook:

- The SEX column:
  - 1 is Male
  - 2 is Female
  - 0 is Total (Male + Female)

- The AGE column
  - 999 is total of all ages
  - 100 is total of people 100 years or older

- The POPESTIMATE2014 column: 7/1/2014 estimate

Let's explore this in Jupyter!