# Ranking Senators w/ Bernie Sanders' Votes

Feb 9 2016

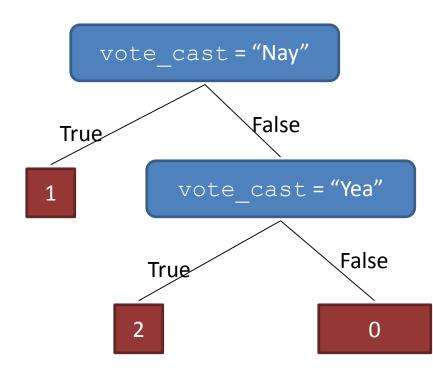
# Last Class: Completed So Far

- 1. Open the spreadsheet from last class.
- 2. You should have 2401 rows (Task 3.7)
- 3. You should have columns through E.
- 4. You should have added vote\_id column
- 5. You should have added numerical\_vote
  column
- 6. You should have built the pivot table

# Encoding data numerically: easier to process, esp. in spreadsheets (review)

- Add a numerical\_vote column in cell G1.
- Write a formula to output:
  - 1 if the senator voted Nay
  - 2 if the senator voted Yea
  - 0 for anything else

# **Decision Trees (review)**



if the senator voted Nay
 if the senator voted Yea
 otherwise

# This Class: Summarize data

- For each senator
  - For each vote
    - What was vote?
- Organize in a table whose rows are senators and columns are vote-names
  - Row-column entry is a senator's vote
  - Row = all votes by senator
  - Column = all votes on this bill
- Do this with a pivot table

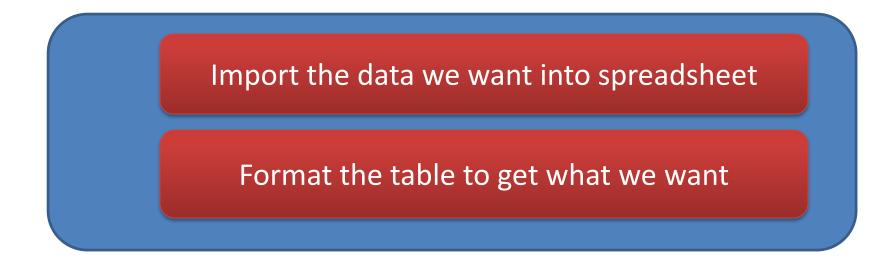
### What is a pivot table good for?

# Pivot table uses

- Restructure data (our use)
- Summarize data (more common use)
  - If our data was salesperson, customer, itemSold, itemCount
  - A "salesperson x itemSold" table could show the sum of all sales of this item, or the max sale of this item, etc.

# We did these things!





#### See anything odd in the pivot table?

• Use Format...Conditional Formatting to color all blank cells red

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- What happened to Booker, Chiesa, and Lautenberg?
- What about Kerry and Markey?

### See anything odd in the pivot table?

• Use Home...Conditional Formatting to color all blank cells red

- Name csv\_output RawData
- Name Sheet2 PivotTable

#### Now what?

#### **Compare senators to Bernie**

# Activity 1-2

• Do Tasks 0 and 1

# Are we done?

- We've got the similarity between any senator's voting record and Bernie's record...
- Isn't that what we were hoping to produce?
- Who is the least Bernie-like?
- What if we compared to *that* person instead?
- Homework suggests that there could be surprises...