Ranking Senators w/ Bernie Sanders' Votes

Sep 22 2015

We've done this

Define Problem

Use Bernie Sanders' votes to compare how liberal other senators are

Vote on bills only!

Write a set of instructions

Computer (spreads...

Solution

Find Data

XML Format

CSVFormat

Make a HUGE spreadsheet table
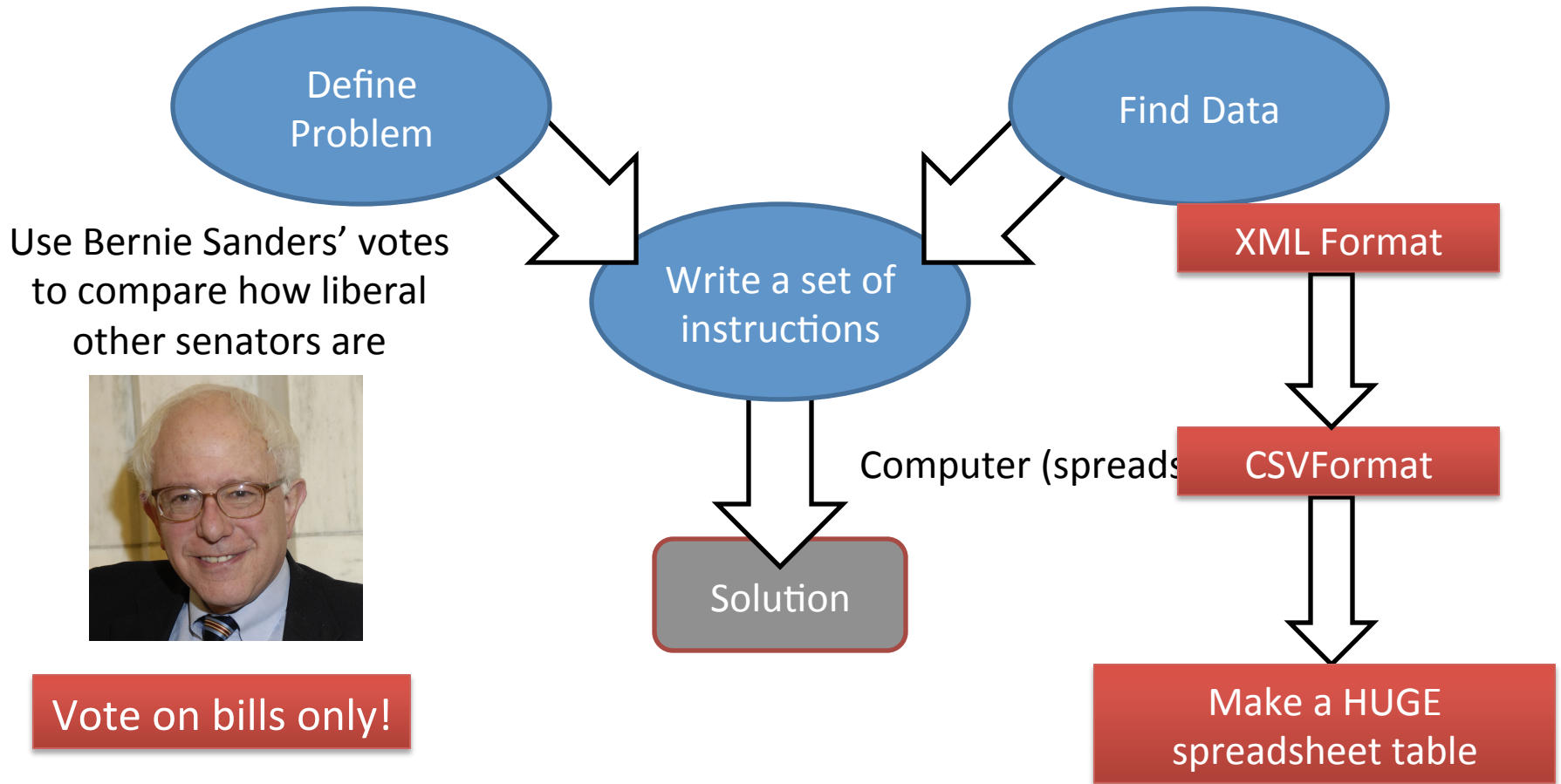
Last Class: Completed So Far

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

Encoding data numerically: easier to process, esp. in spreadsheets

- 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

vote_cast = "Nay"

True

False

1

vote_cast = "Yea"

True

False

2

0
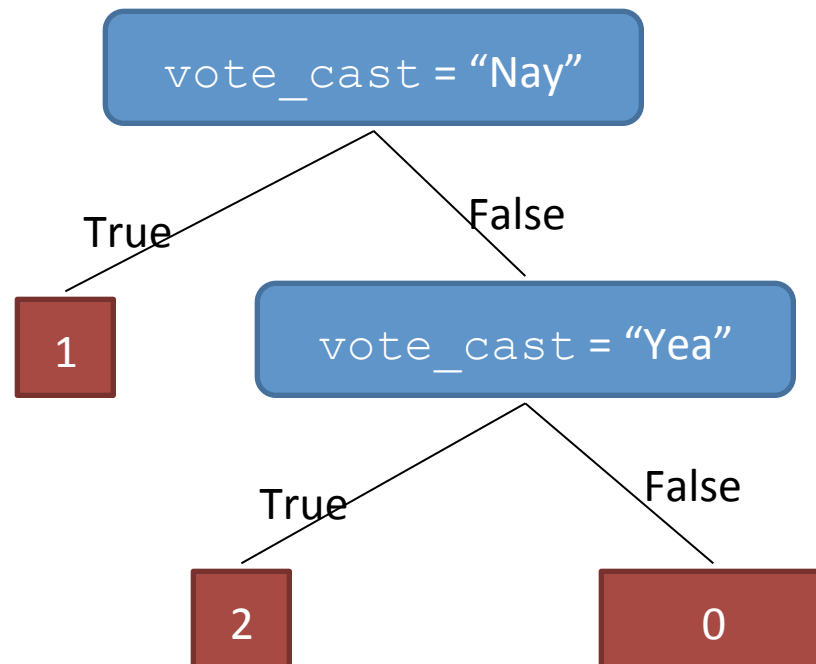
1 if the senator voted Nay
2 if the senator voted Yea
0 otherwise

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!

Find out what CSV is

| XML Format | → | CSV Format | → | Make HUGE Table |

Import the data we want into spreadsheet

Format the table to get what we want

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…