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Cmsc 436 - Data Visualization

Activity 2 - Portfolio

Part 1: Data Abstraction
  A. User guide
    a. Because there are over one hundred fields that are mentioned in the dataset and they are used for specific projects or research areas, some majors fields are only mentioned here:

Field	Semantic
Donor name	Name of donor country or multilateral organizations
Recipient name	Name of recipient country or region
Year	Commitment year-always populated
Commitment amount	Agreed amount to provide from the donor during the project's period
Nominal/Current	Current(USD): The donated amount in USD at the average exchange rate in the affected commitment year. Constant(USD): the donated amount in USD with the adjusted rate for inflation and rate changes
Title, long description, short description	Descriptive information that is provided by the donor
Purpose code	Coding system that expands OECD's purpose code scheme but this system is still underway.

    b. By looking through the user guide, I can see how to cite the dataset and where data comes from.
    c. There is not any question.
  B. Data abstraction steps:
    a. Data type: table
    b. Attribute type:

Field	Attribute type
Diddata_id	categorical
Year	quantitative

coalesced_purpose_code	categorical
Donor	categorical
coalesced_purpose_name	categorical
Recipient	categorical
Commitment	quantitative

    c. Questions table:

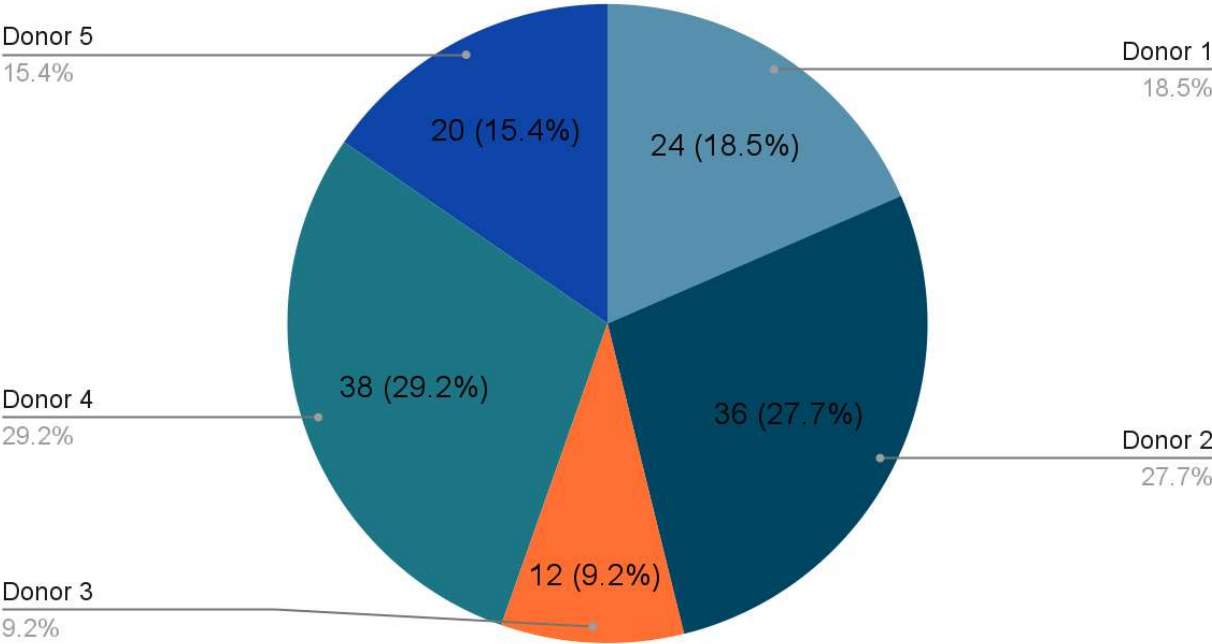| Question	Need a chart?	Which attributes needed to answer?	Need to transform? If yes, how?	Does transform change attribute types? If yes, how?
Which donor/country donated the most?	Yes	Donor, commitment amount	No	No
How many donors?	Yes	donor	No	No
What is the most common purpose?	Yes	Purpose name, purpose code	No	No
What year get the most donations?	Yes	Year, commitment amount	No	No
What country/donor donated most often in terms of number of years?	Yes	Year, donor	No	No
Total amount of donation?	No	Commitment amount	No	No

Part 2: Task Abstraction

Rank	Question	Query task (low level)	Search task (mid-level)	Analyze task (high level)
4	Which donor/country donated the most?	compare	browse	present
5	How many donors?	summarize	Lookup	present
3	What is the most common purpose?	compare	browse	present
2	What year get the most	compare	browse	present

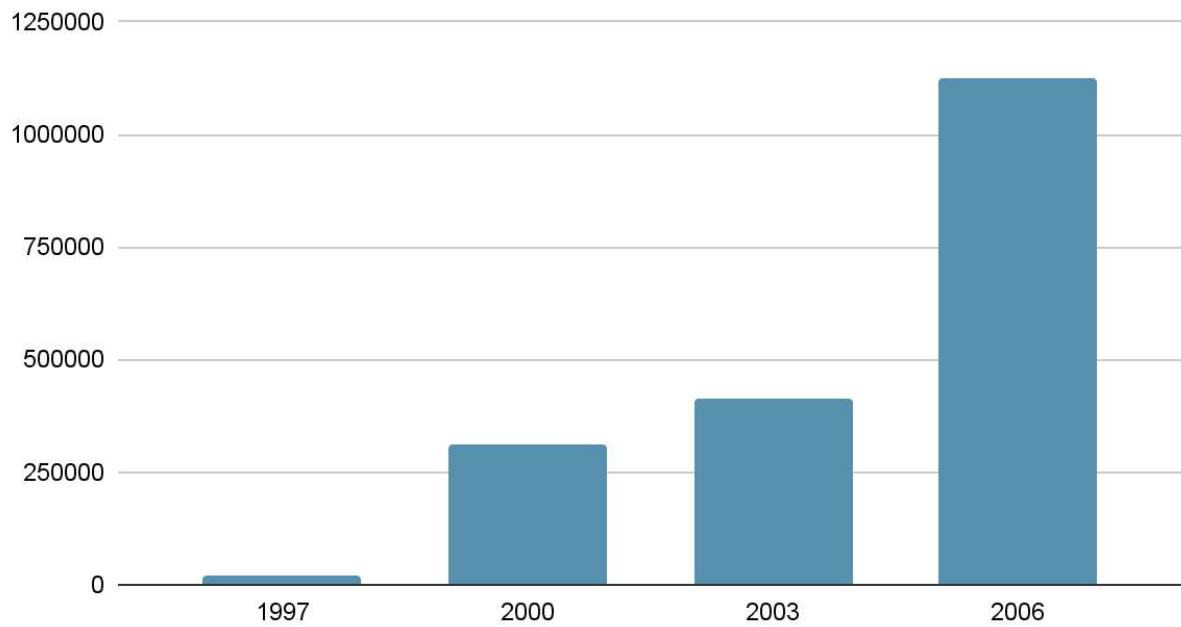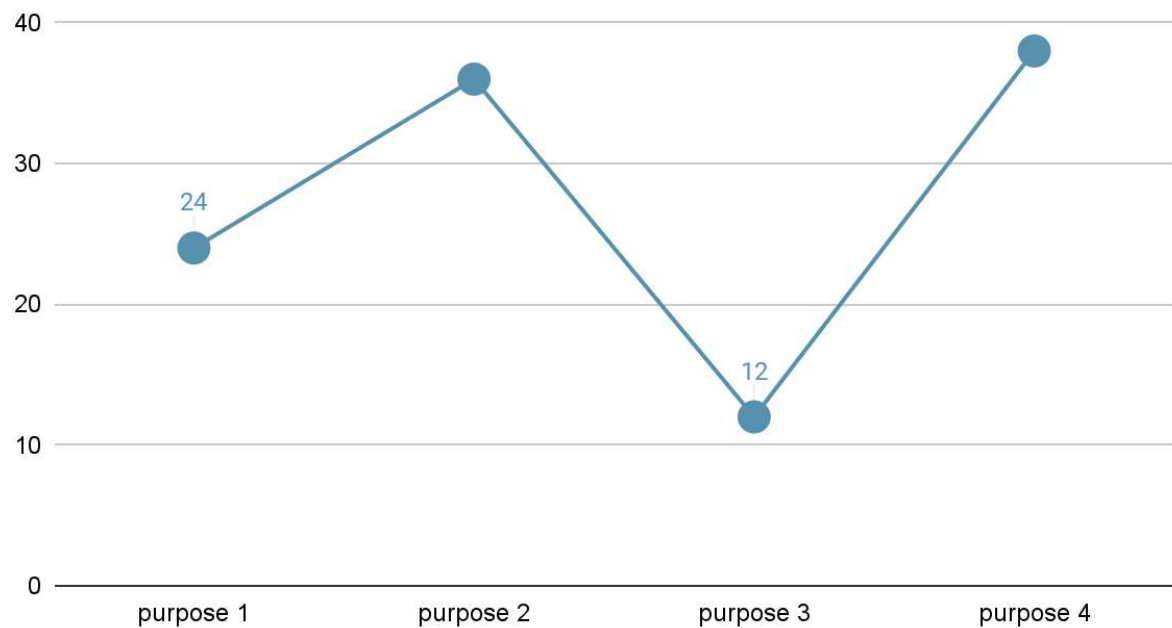|	donations?			
1	What country/donor donated most often in terms of number of years?	Compare, summarize	browse	Present, discover
6	Total amount of donation?	summarize	lookup	present

C. Quick Sketch

The most common donor in terms of the number of year

Donor 5
15.4%

Donor 1
18.5%

20 (15.4%)

24 (18.5%)

Donor 4
29.2%

38 (29.2%)

36 (27.7%)

Donor 2
27.7%

12 (9.2%)

Donor 3
9.2%
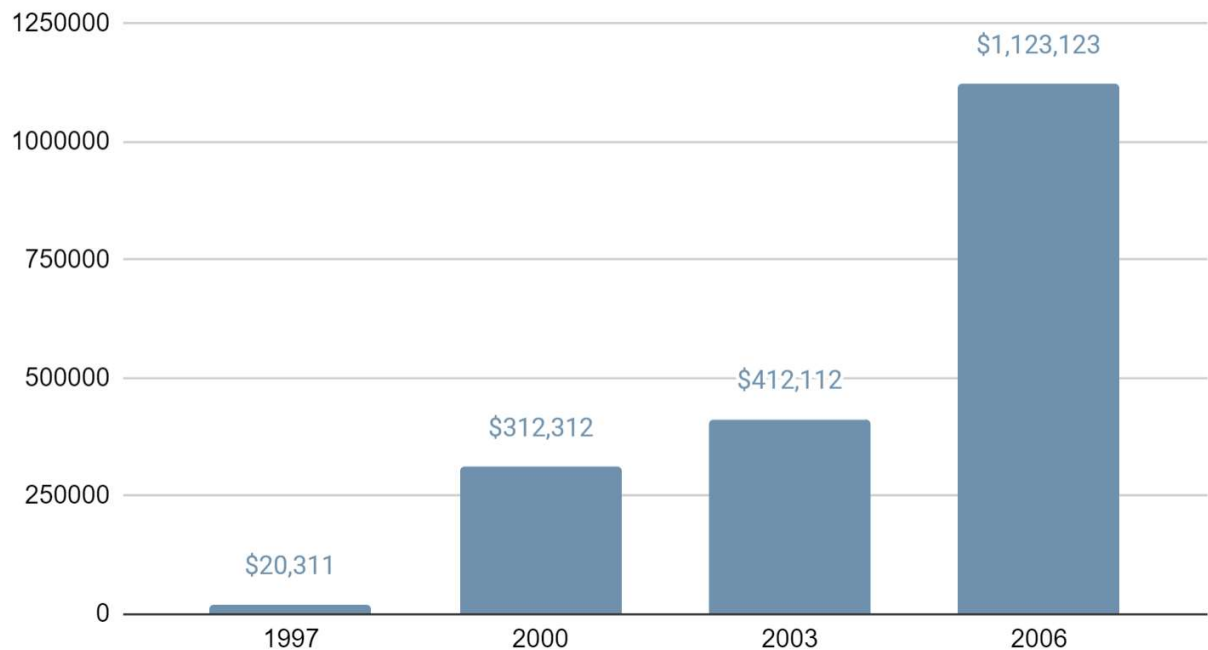
Amount of donation for every year

Number of purpose

d/ To refine my sketches, I will refine only the second one. I will add the data for each column, vertical label, and horizontal label. About the data for each column, the currency format will be used.

Amount of donation for every year

Part 3: Reflect and Discuss
  A. I learned how to turn data and tasks into abstractions that can be easily turned into simple sketches. There are many steps that can be followed to create a proper sketch and they are demonstrated and instructed carefully in this exercise.
  B. I think that is the new definition of the abstraction method. Because there are many differences between textbooks and real-world data, it's really hard to define which abstracted task is suitable for each task.
  C. I think this exercise was a good foundation for our project in the very first state of the project. We were able to identify the tasks and abstract them to visualize them in the alpha release. Also, the exercise also helps us to keep track of the tasks as we can go back and modify them later.