Hash Maps: Conceptual

Tables

1 min

A data structure's main utility is allowing for data to be represented in a way that resembles the way people will use that data. In some cases, the primary function of that data is that it will be sequenced through like a list and so we use a data structure that allows for easier iteration, like a linked list. In others, the usefulness comes from specifying interrelationships within the data.

In the case of tabular data there is a relationship between the elements of a row. Each column corresponds to a different feature of the row. Let's consider the following table:

State	State Flower
Alabama	Camellia
Hawaii	Hibiscus
Mississippi	Magnolia
New York	Rose
West Virginia	Rhododendron

Each State on the left corresponds to a specific State Flower given on the right. For instance, "New York" corresponds to "Rose". This kind of table, with only two columns, represents a special relationship that mathematicians would call a "map". This table maps states to state flowers, but many other relationships can be modeled with maps.

Instructions

What are some other maps you can define? How is an address book like a map? A list of congresspeople with the counties they represent? A map of dogs to their breed?

Oceans Compared by Size

Ocean Name	Ocean Size
Pacific Ocean	669,880,000 km^3
Atlantic Ocean	310,410,900 km^3
Indian Ocean	264,000,000 km^3