Chapter 2 - Data

What are data?

Data values are useless without their context.

To establish context, we answer 6 questions

6W's - Who, What, When, Where, Why (if possible) and How?

Who? individual cases about whom (or about which - if they are not people) we record some characteristics.

What? characteristics recorded about each individual are called *variables*.
Types of variables: Quantitative and Categorical

Quantitative variables: The numbers act as numerical values - measurable. For example, age, SAT score, height and GPA.

Categorical variables: names, categories. For example, area code, color, gender, eye color, zip code

If it isn't clear whether a variable is categorical or quantitative, think about WHY you are looking at it and what you want it to tell you.
Example: The FAA monitors airlines for safety and customer service. For each flight, the carrier must report the type of aircraft, number of passengers, whether or not the flights departed and arrived on schedule, and any mechanical problems.

State the variables and their type.

Who? airline flight
What? info
When? current
Where? US
Why? safety & customer service
How? report