

## Data Planning

### Goal:

- Clearly define your goal (write it down)
- Measures of success, and plans on how to achieve that

### Deliverable:

- Documentation of your goal
- If you haven't defined success, you won't know when you have achieved it

### How you get there:

By answering questions about the final product & formulating or identifying any initial hypotheses.

## Acquisition

AKA: Data gathering  
Data Import  
Data Wrangling  
(Acquisition + Prep)

Goal: Create a path from original data sources to the environment in which you will work w/ the data

Deliverable: A file, acquire.py, that contains the function(s) needed to reproduce the acquisition of data

### How to get there

: SQL: clean-up, integration, aggregation or other manipulation of data in the SQL Environment

Pylib: pandas

May use Spark and/or Hive when acquiring data from a distributed environment such as HDFS.

Examples of source types:

- RDBMS
- HDFS
- Static local flat files (CSV, txt, xls)

# My SQL (Structured Query Language)

- **RDBMS** - Relational Database Management system
  - Stores data in tables + creates relationship between the data in different tables.
  - Most common way to permanently store data.
  - Manages the data

• **Database - (DBMS)** Actual location of the data stored on a disk

• **Database Client** - Program used to connect to a database

• **Database Server** - Computer that runs the DBMS + stores the data

- Either on premises or in the cloud

## • DDL

**(Data Definition Language)** - Commands that change the structure of the database or the DBMS

- Changes structure of tables in database

## • DML (retrieval)

**(Data Manipulation Language)** - Insert, update, delete, retrieve information from databases

**Queries** - Statements sent to the server individually, w/ results sent back to the client

- ex) how many clients does this seller have?
- Asks questions

MySQL: Used to interact w/ database server run