Week 5

March 22 - March 30

https://2025.open-data.nyc/
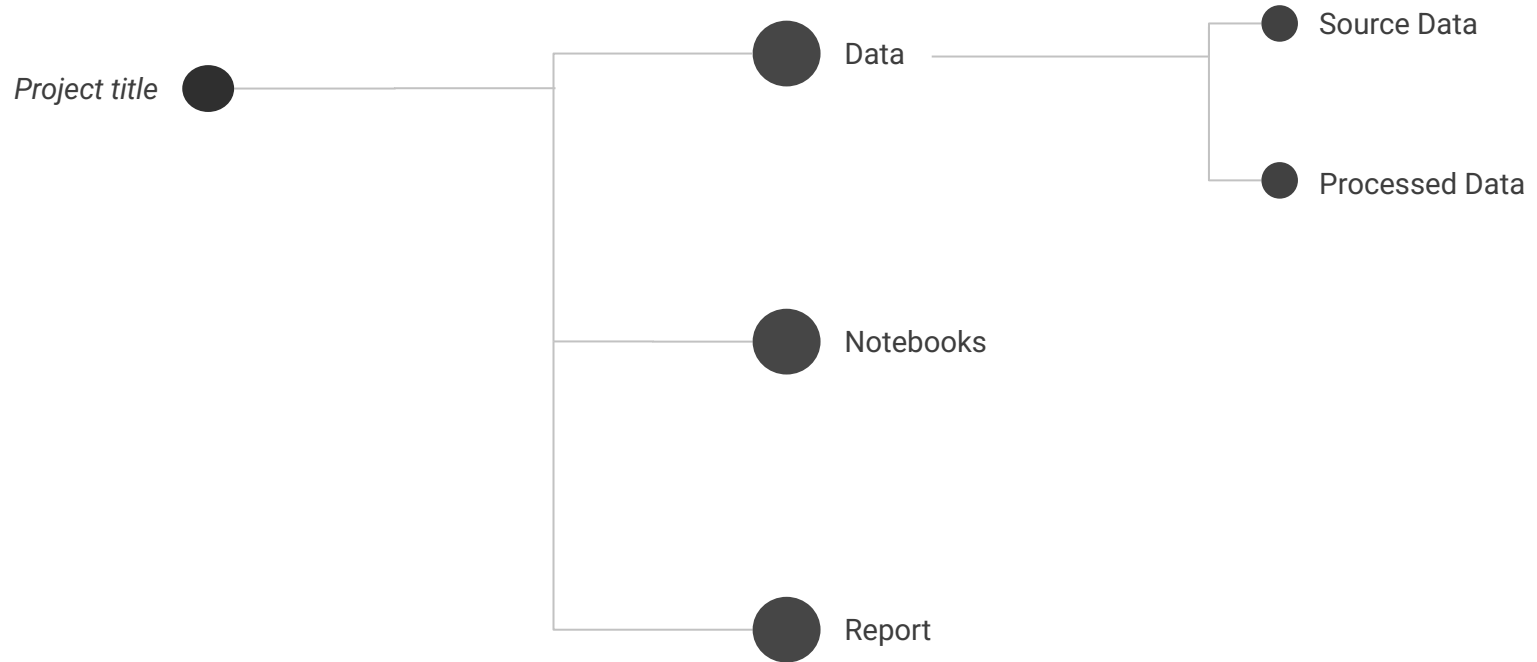
Organize your data

Organize your project files:

read data from:

`'../Data/Source Data'`

save data to:

`'../Data/Processed Data'`

Approaches to data analysis

Modes of data analysis:

- Exploratory data analysis
- Hypothesis-driven

Exploratory data analysis

Discover patterns, trends, and relationships in the data without a predefined hypothesis

- Start from data
- Search for insights
- Uses visualization and descriptive statistics

Hypothesis-driven research

Starts from a question to answer or test.

Follows a structure:

- Define the research question.
- Collect relevant data.
- Apply statistical methods to test the hypothesis.
- Interpret results

Uses inferential statistics to test generalizability of findings

How to get from a question to an analysis:

- What can be measured?
  - ➜ shape an abstract question to quantifiable measure(s)
- What data is available?
  - sources:
    - own sources
    - open data
    - surveys or data collection
  - how closely does the data match the question?
- What methods will give the best answer?