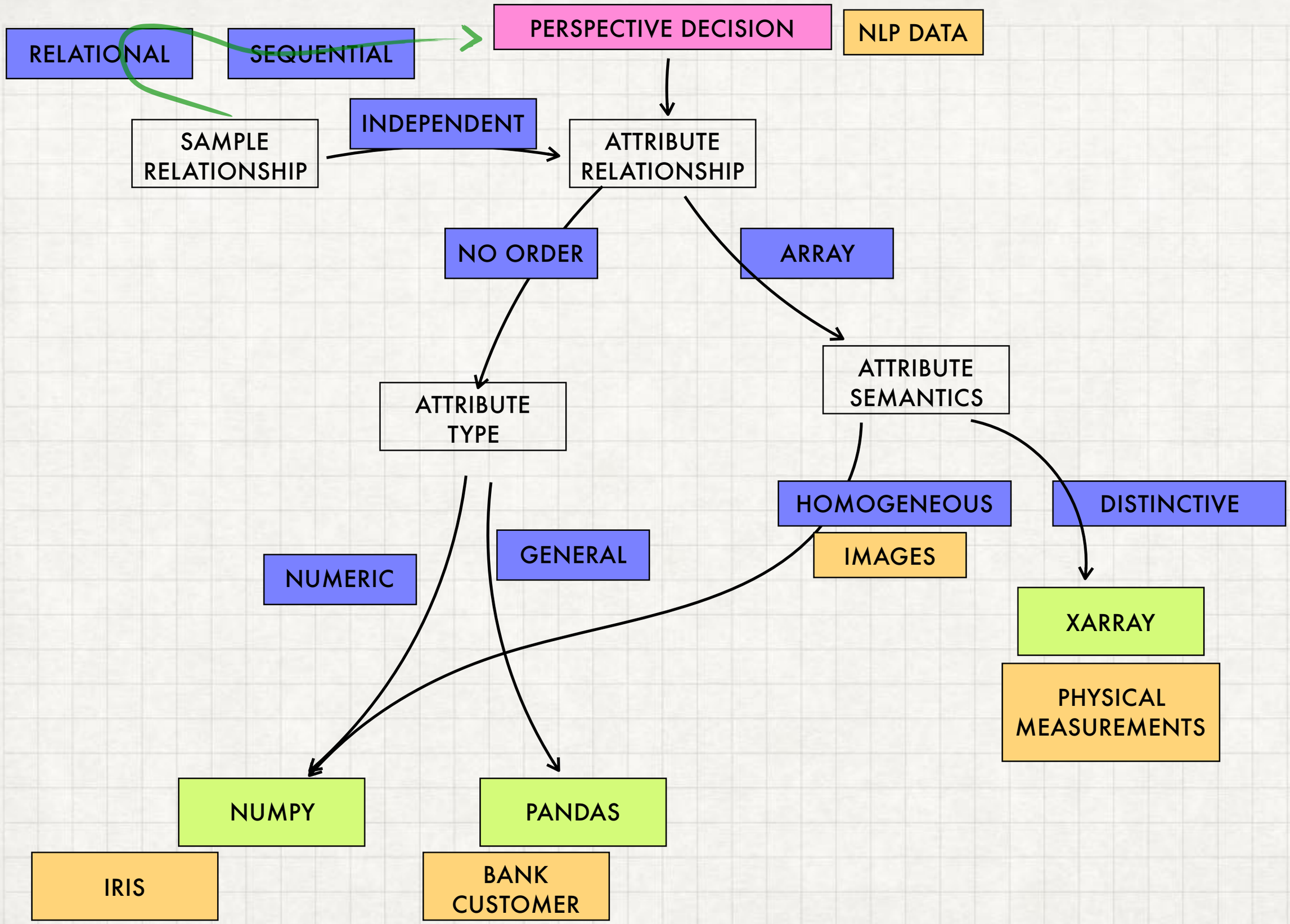
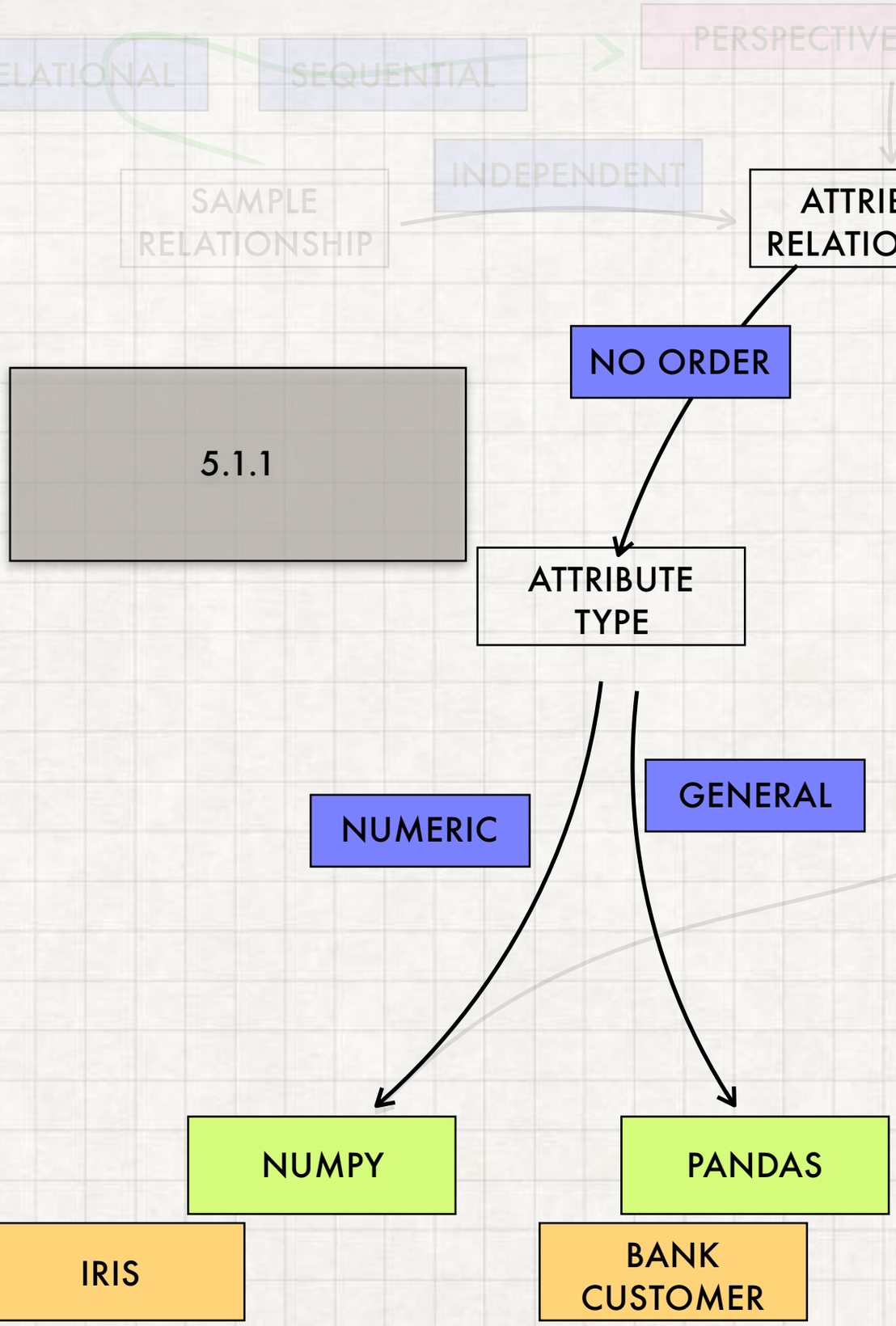
PRACTICAL DATA SKILLS

ARRAY OPERATIONS

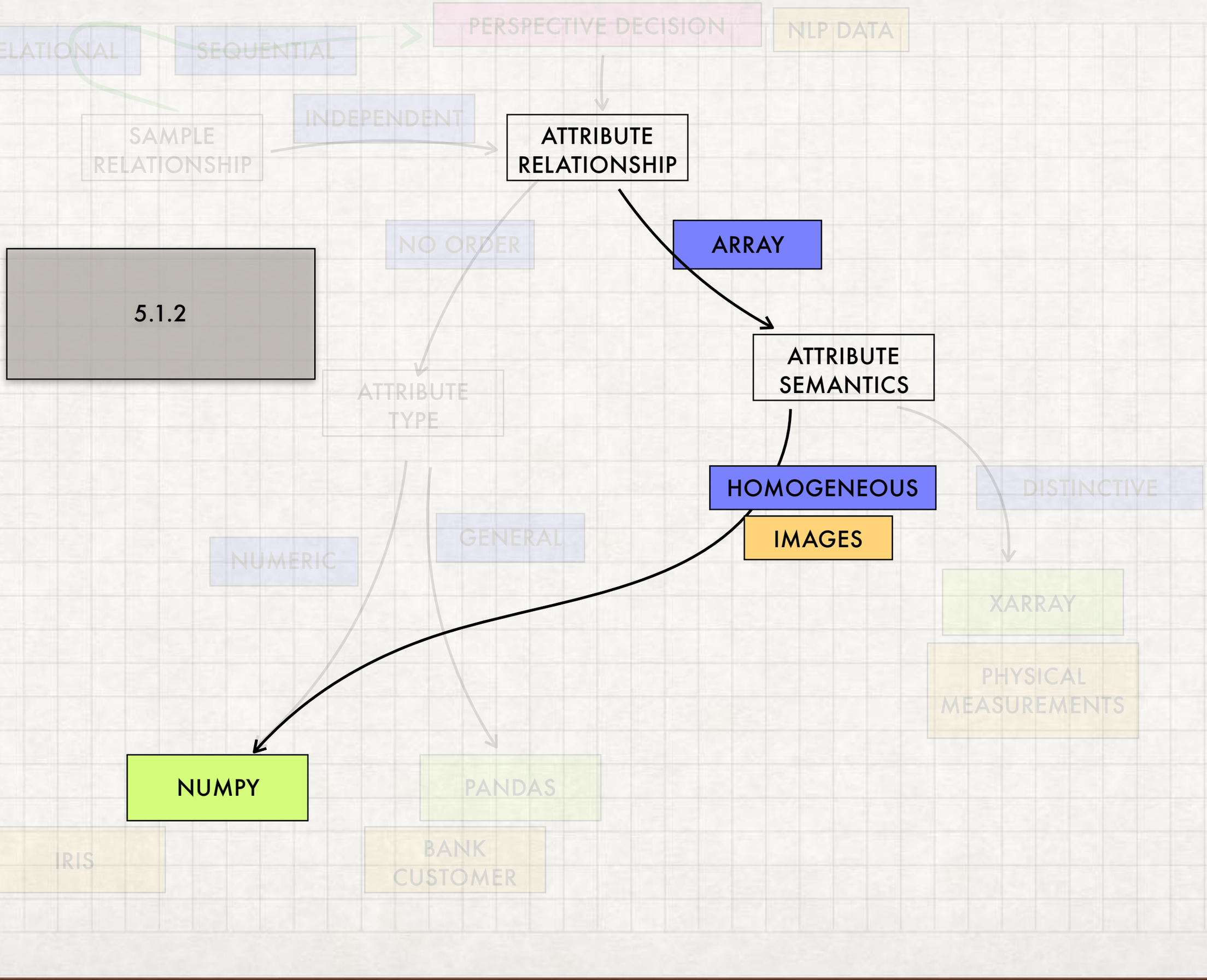
DATA WRANGLING

TOOLS

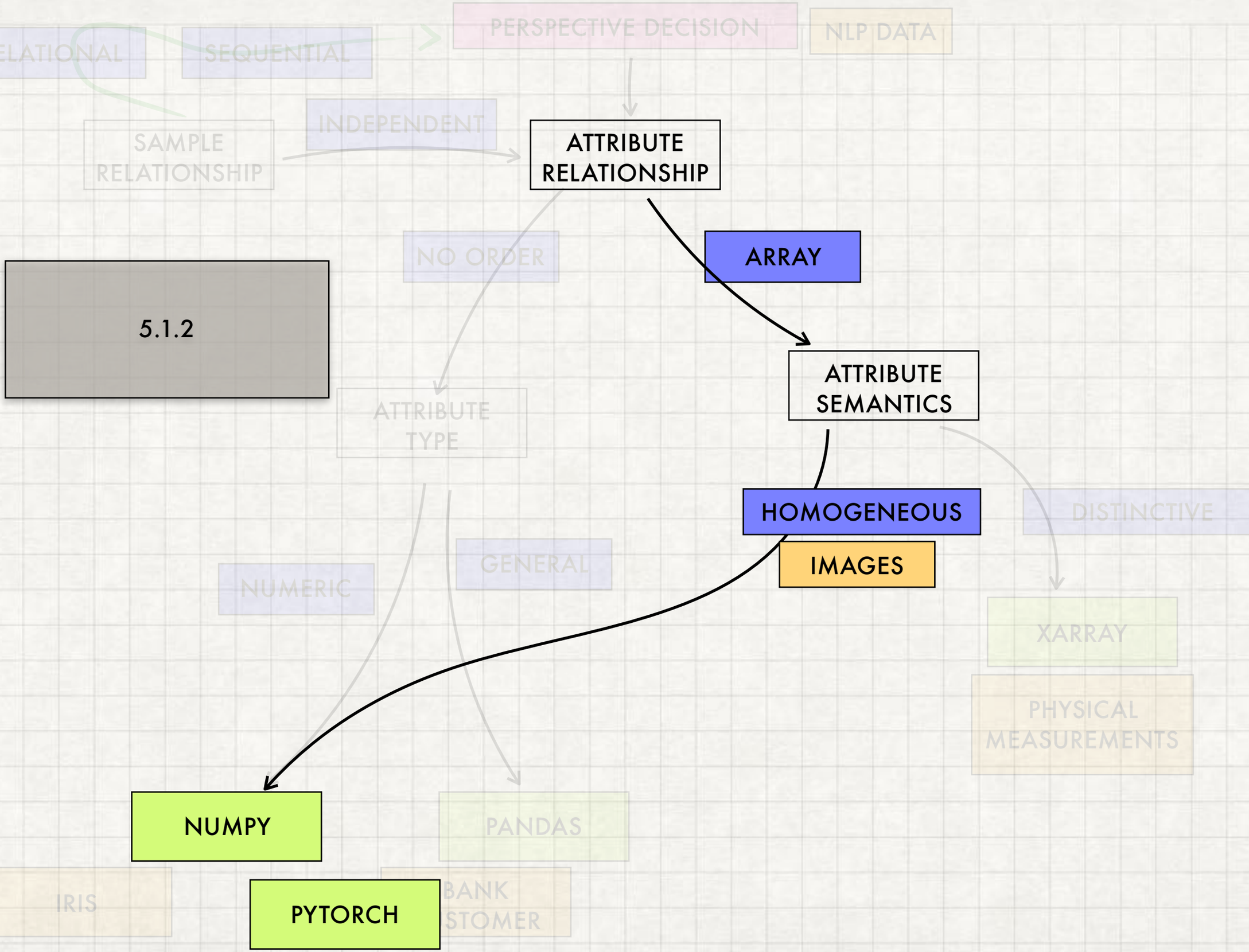

RELATIONAL
SEQUENTIAL
PERSPECTIVE DECISION
NLP DATA
SAMPLE RELATIONSHIP
INDEPENDENT
ATTRIBUTE RELATIONSHIP
NO ORDER
ARRAY
ATTRIBUTE TYPE
ATTRIBUTE SEMANTICS
HOMOGENEOUS
DISTINCTIVE
IMAGES
NUMERIC
GENERAL
XARRAY
PHYSICAL MEASUREMENTS
NUMPY
PANDAS
IRIS
BANK CUSTOMER


5.1.1
ATTRIBUTE RELATIONSHIP
NO ORDER
ATTRIBUTE TYPE
NUMERIC
GENERAL
NUMPY
PANDAS
IRIS
BANK CUSTOMER

5.1.2


ATTRIBUTE RELATIONSHIP
ARRAY
ATTRIBUTE SEMANTICS
HOMOGENEOUS
IMAGES
NUMPY

5.1.2


ATTRIBUTE RELATIONSHIP
ARRAY
ATTRIBUTE SEMANTICS
HOMOGENEOUS
IMAGES
NUMPY
PYTORCH

5.1.2

ATTRIBUTE RELATIONSHIP

ARRAY

ATTRIBUTE SEMANTICS

HOMOGENEOUS

IMAGES

NUMPY

TENSORFLOW

PYTORCH

5.1.3

ATTRIBUTE RELATIONSHIP

ARRAY

ATTRIBUTE SEMANTICS

DISTINCTIVE

XARRAY

PHYSICAL MEASUREMENTS

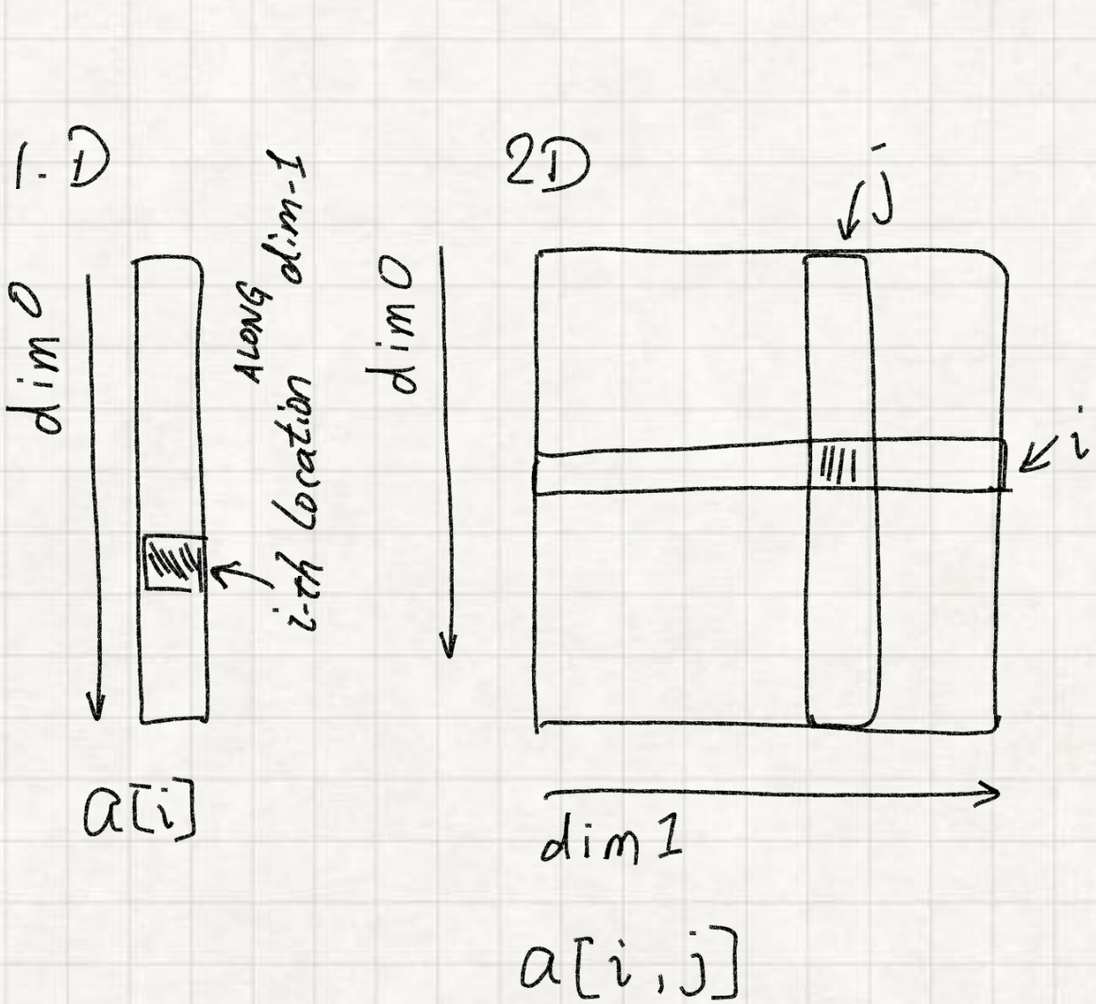
DATA WRANGLING

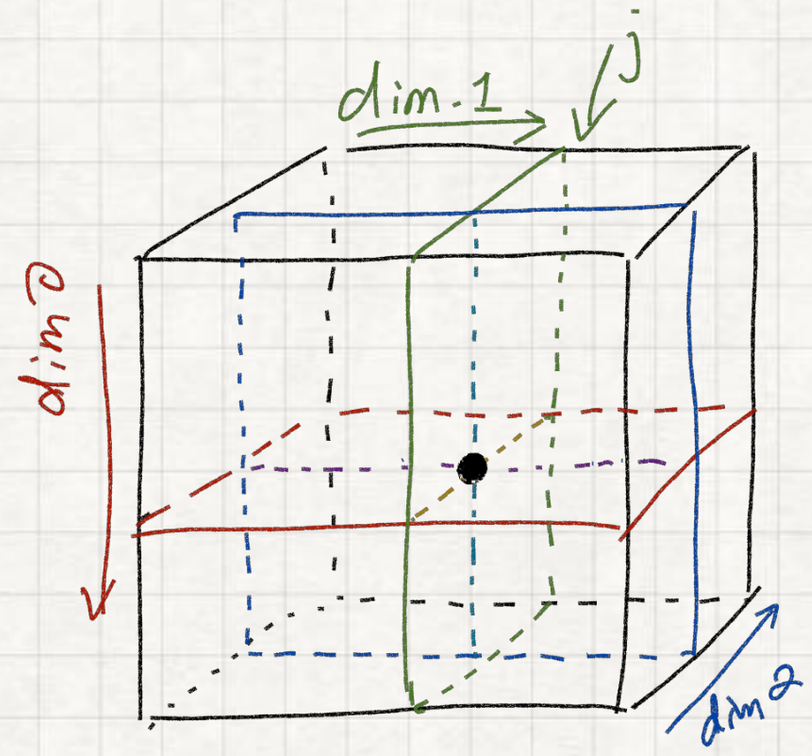
WITH PYTHON

ADVANCED ARRAY OPERATION

- Clarify : Axis/Dimension Index / Coordinate Index
- Indexing / Slicing
- View-vs-Copy (check reference)
- Reducing / Broadcasting

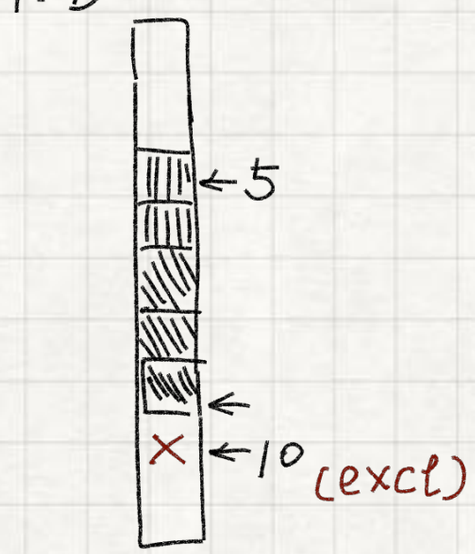
AXES / DIMENSIONS VS LOCATION ALONG A DIM



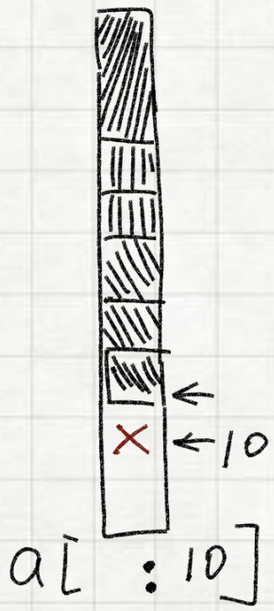


INDEXING AND SLICING

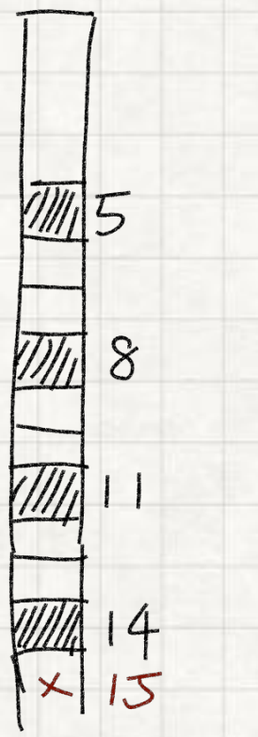
1-D



a[5:10]



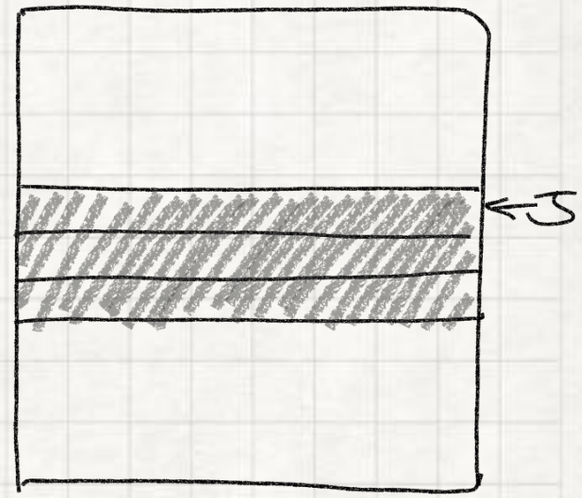
a[:10]



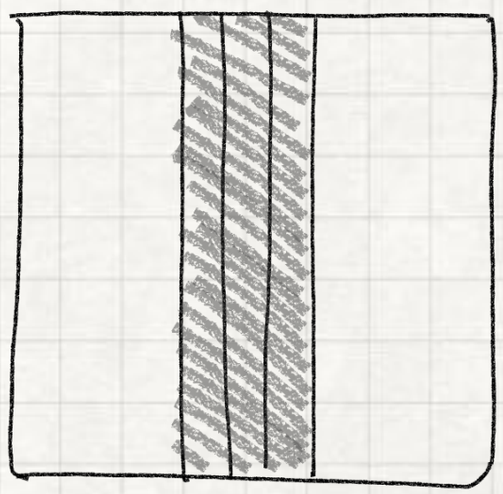
a[5:15:3]

a[-3:]

2D

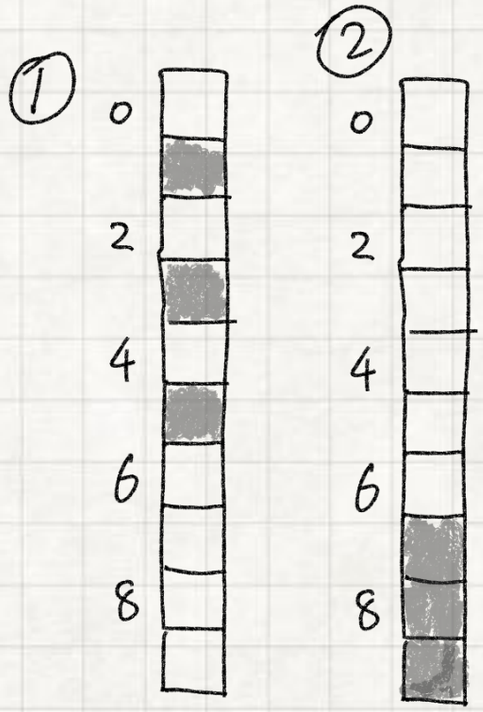


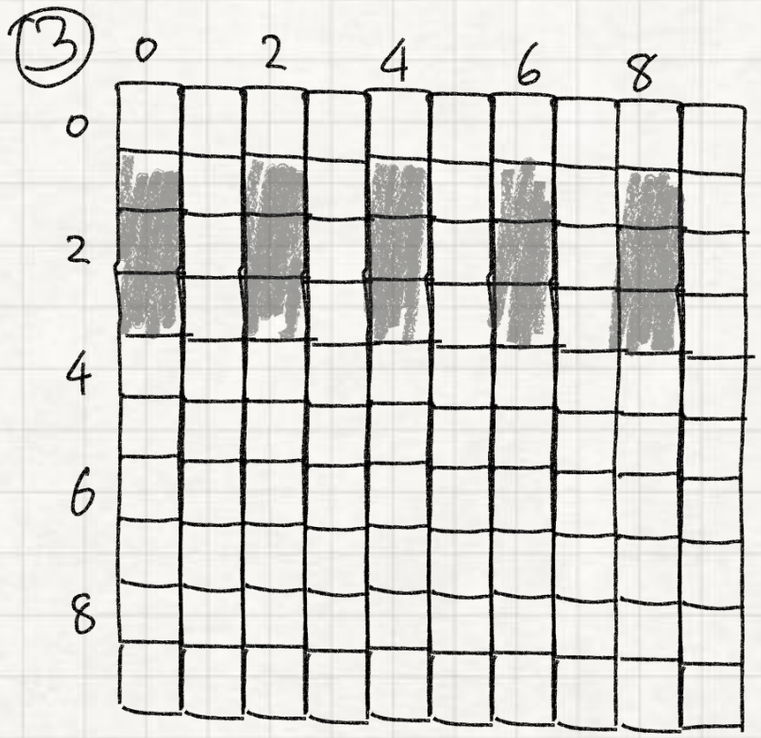
a[5:8] = a[5:8,:]

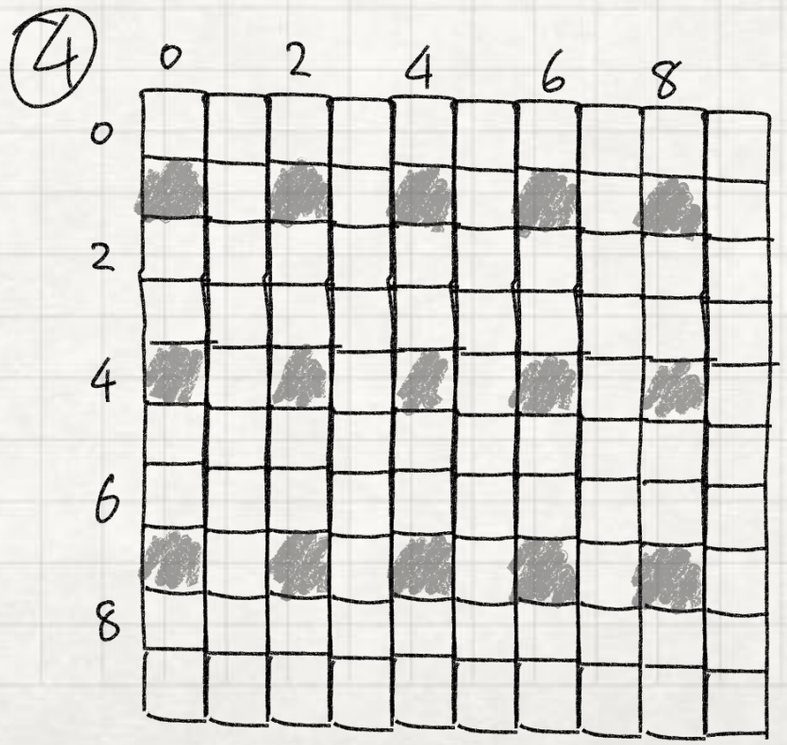


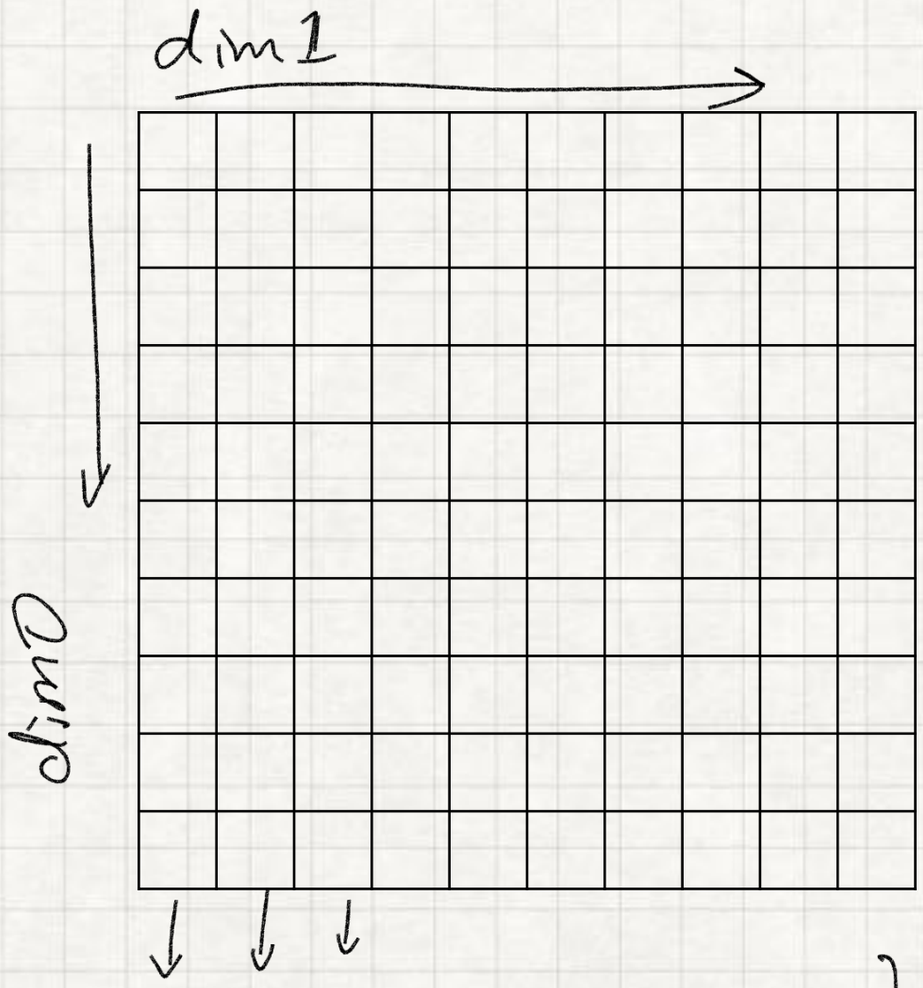
a[:, 5:8]

EXERCISE









EXERCISE

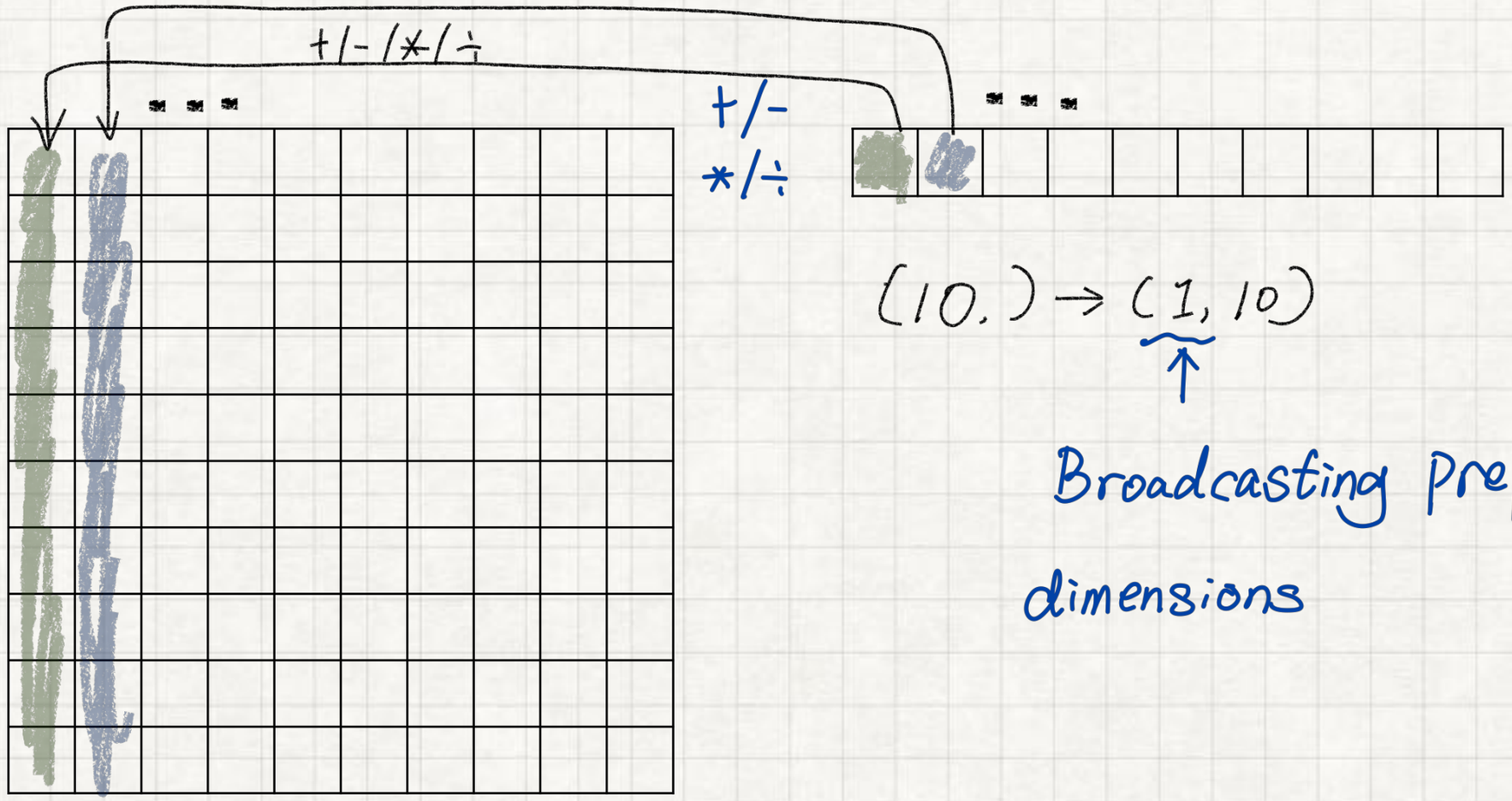
Compute the max and min value of each attribute of the Iris dataset.

sum of
mean of C0 C1 C2 . . .
max of
. . .

```
    .sum
a.mean(axis=0):
    .max
    ...
```

→ RESULT: Dim 0. Size × 1

(The dim 1 has been REDUCED)



(10.) → (1, 10)

Broadcasting prepend "1"-len-dimensions

HAPPY DATA WRANGLING!