Using Dictionaries

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Overview

Dictionaries

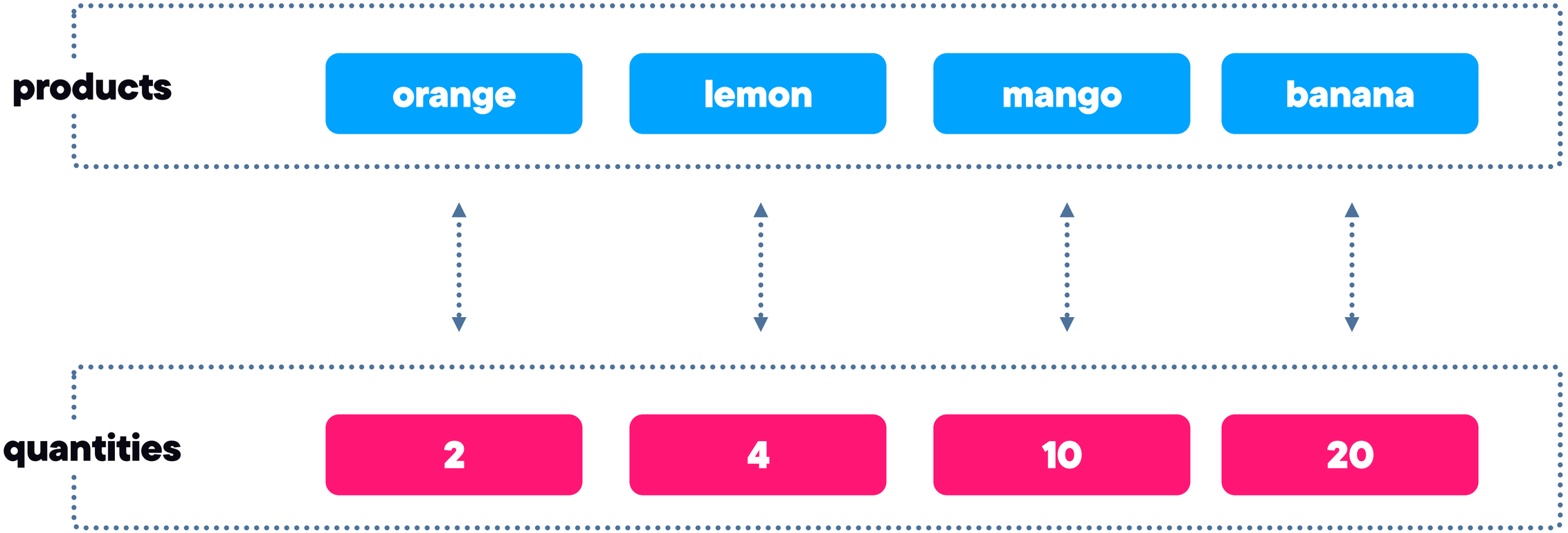
- Components
- Properties

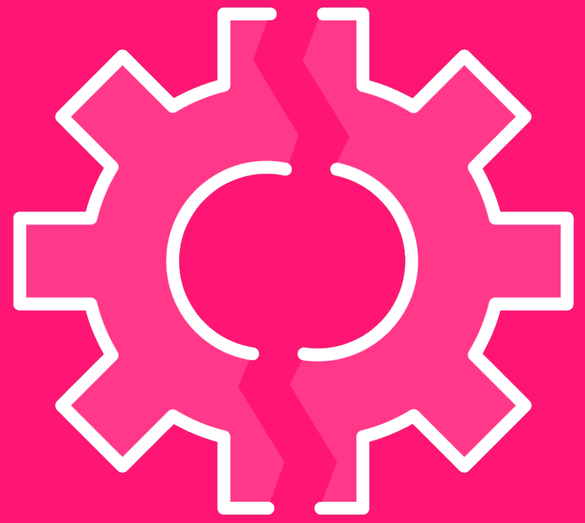
Jupyter Notebook

- Creating dictionaries
- Retrieving and updating elements
- Applying methods

- Lists are more efficient at storing inventory information than variables.

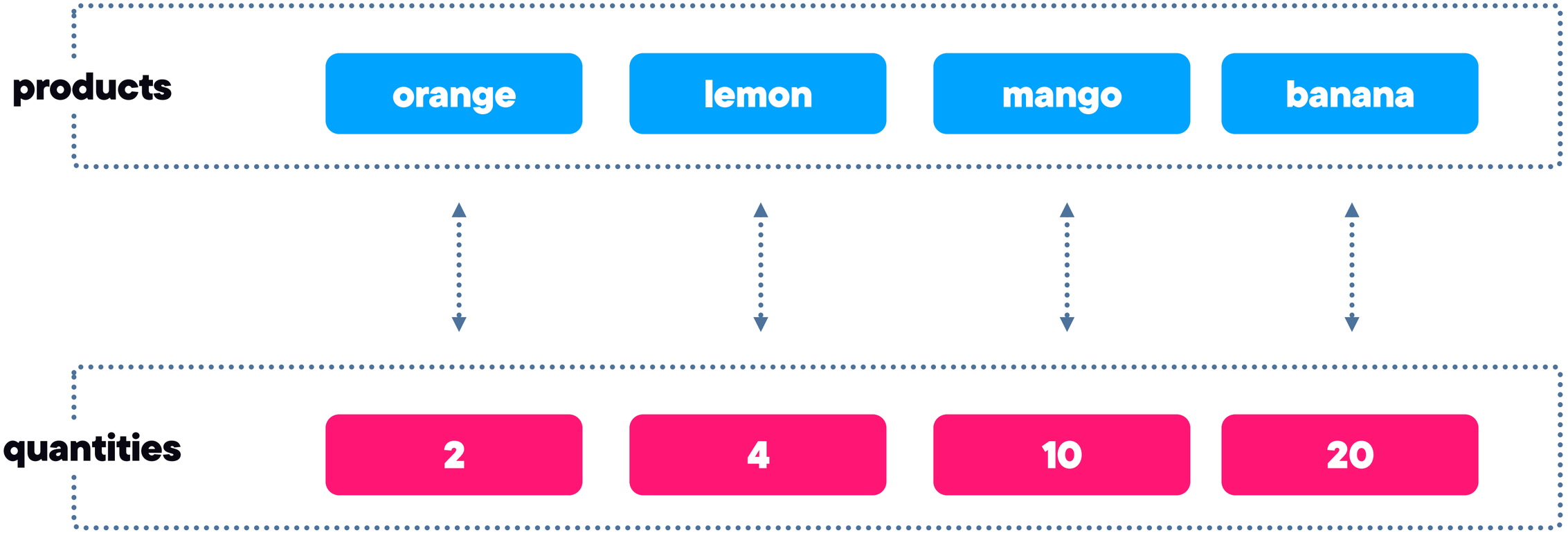
Storing Information



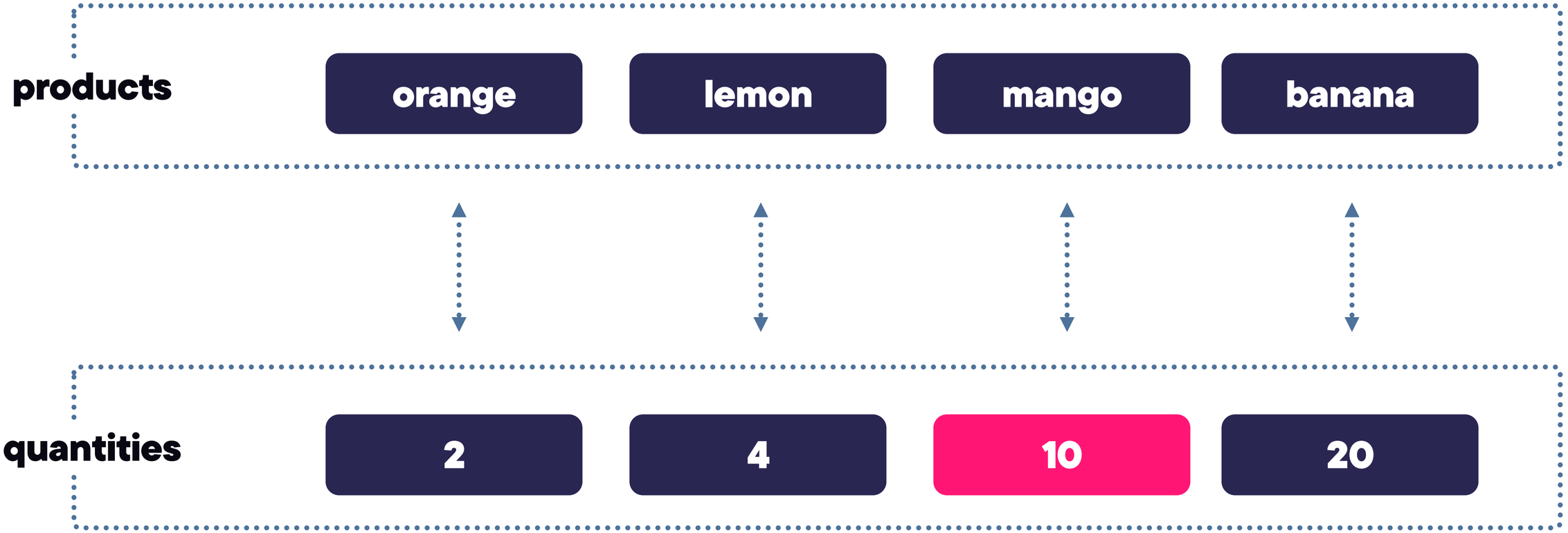


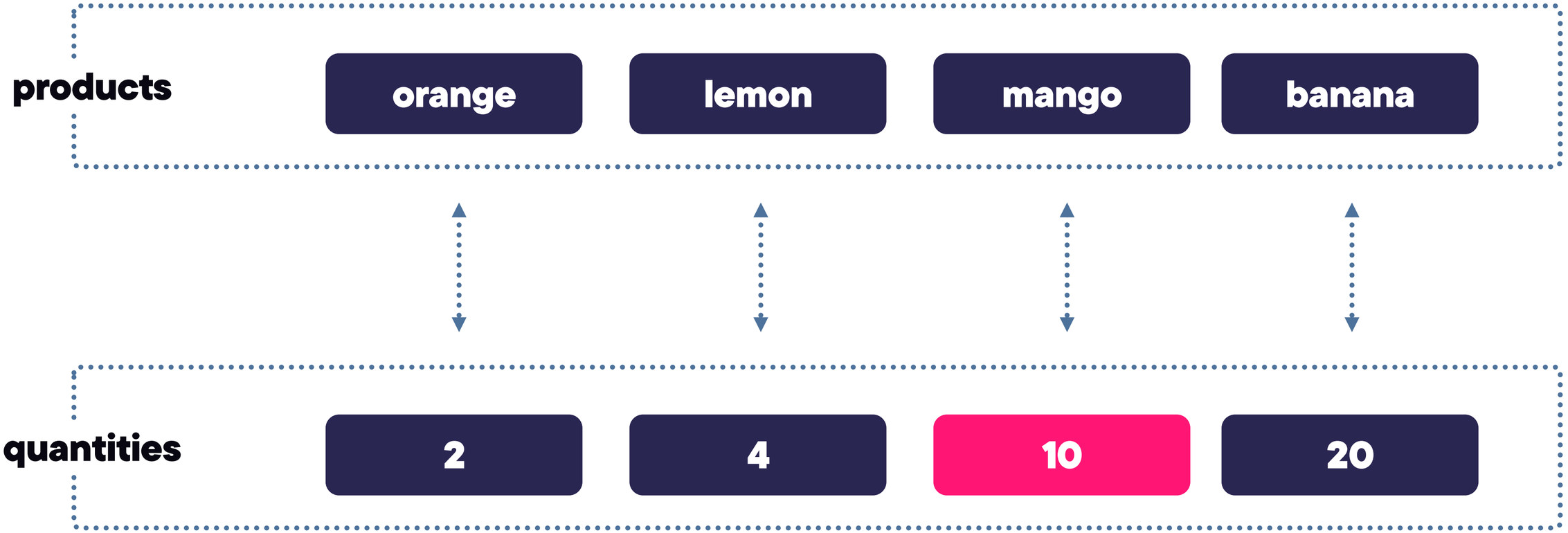
Performance problem

Storing Information



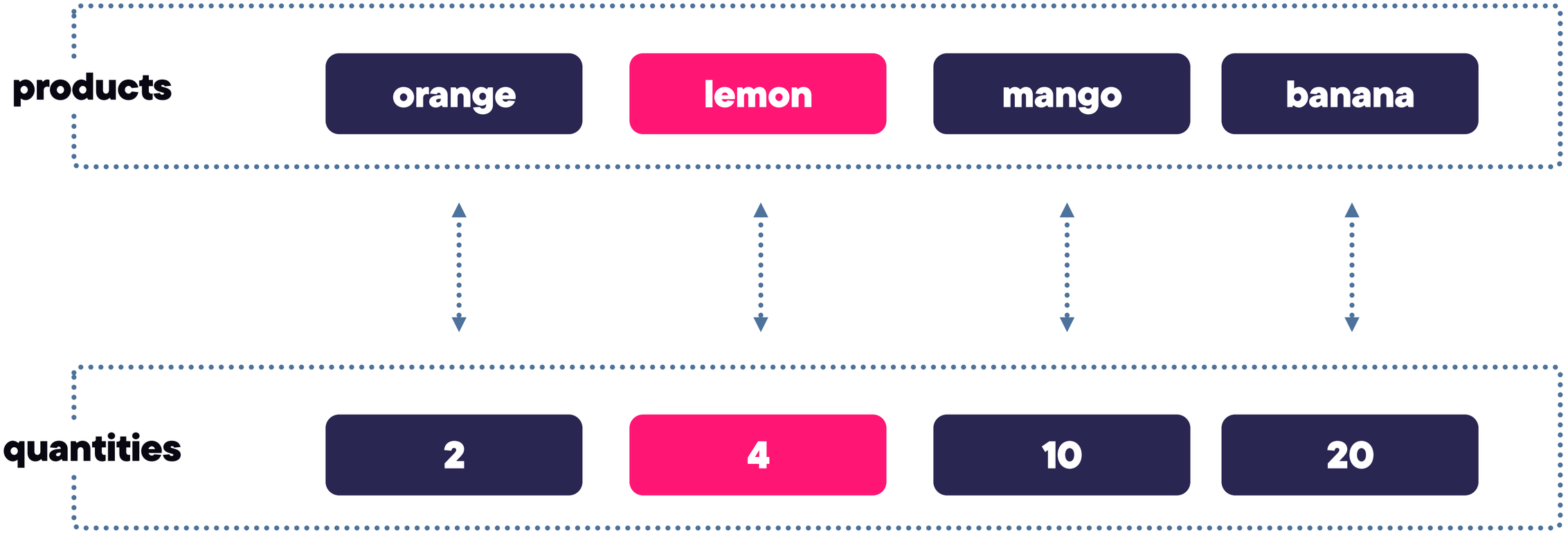
Storing Information





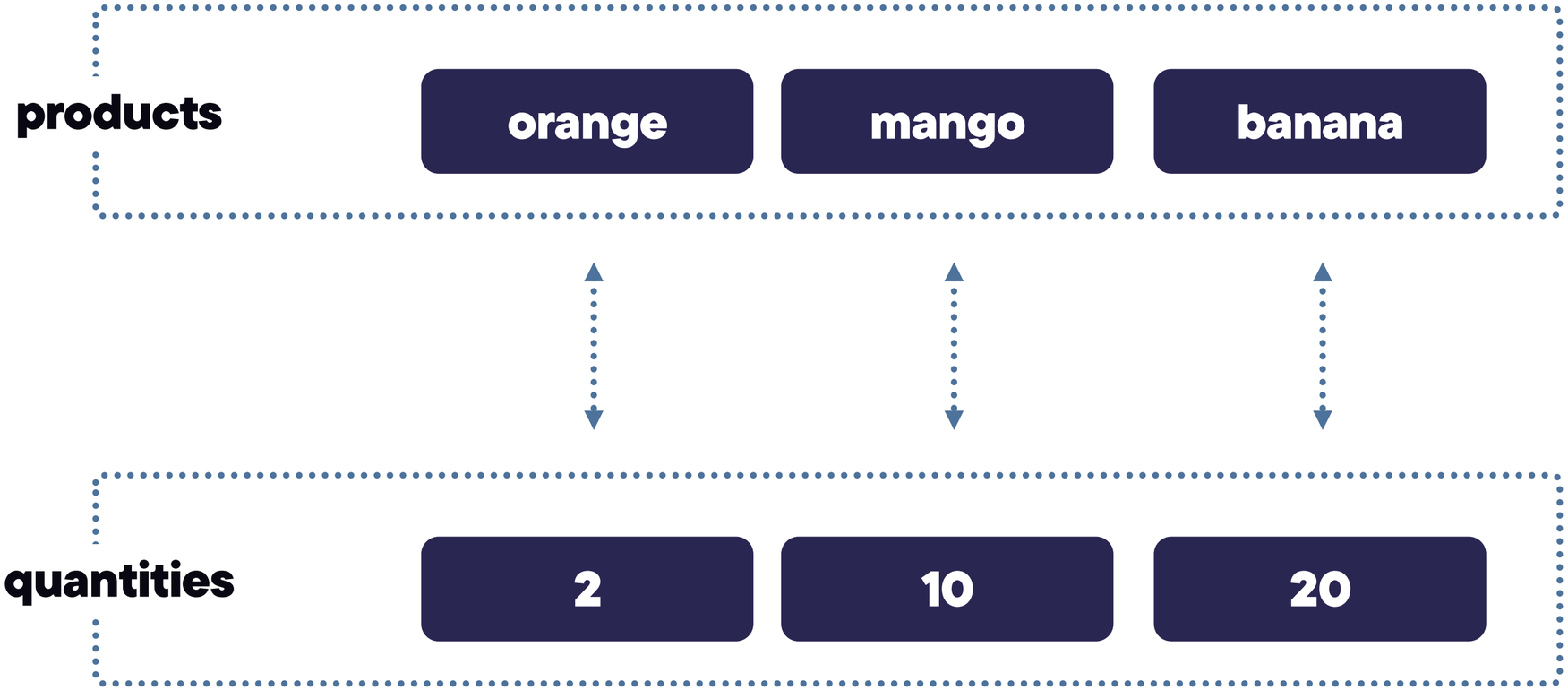
products.index('mango') 2

quantities[2] 10



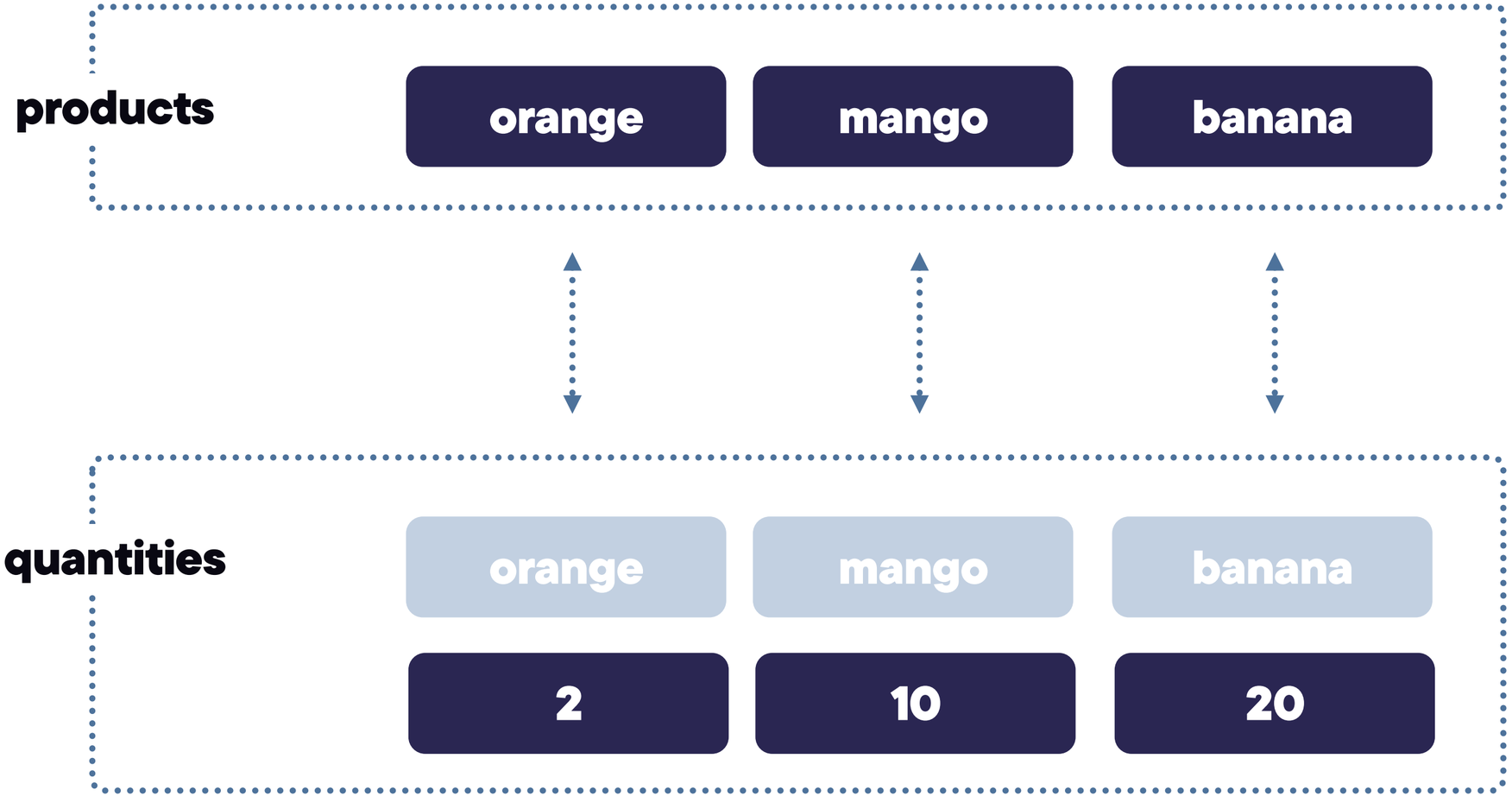
products.index('lemon') 1

quantities[1] 4



products.remove(‘lemon’)

quantities.remove(4)


products
orange
mango
banana
quantities
orange
mango
banana
2
10
20

Dictionaries

key-value pairs

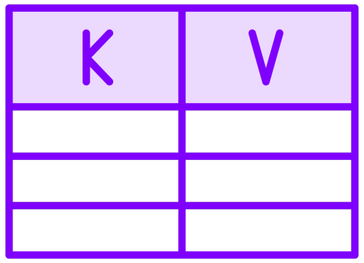
Dictionaries

key-value pairs

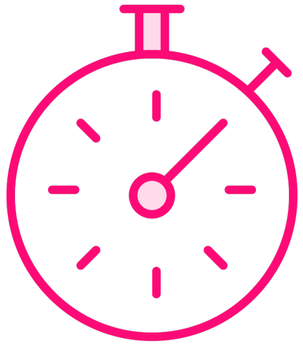
Dictionaries

key-value pairs

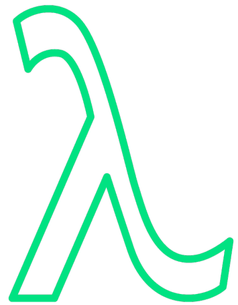
Use cases



Unique keys



Fast lookup



Functions

Dictionaries


```
inventory = {'orange' : 2, 'mango' : 10, 'banana' : 20}
inventory = dict (orange =  2, mango = 10, banana = 20)
```

Dictionaries


```
inventory = {'orange' : 2, 'mango' : 10, 'banana' : 20}
inventory = dict (orange =  2, mango = 10, banana = 20)
```

Unique

Immutable

inventory

orange	2
mango	10
banana	20

inventory

orange	2
mango	10
banana	20

Duplicates

Mutable

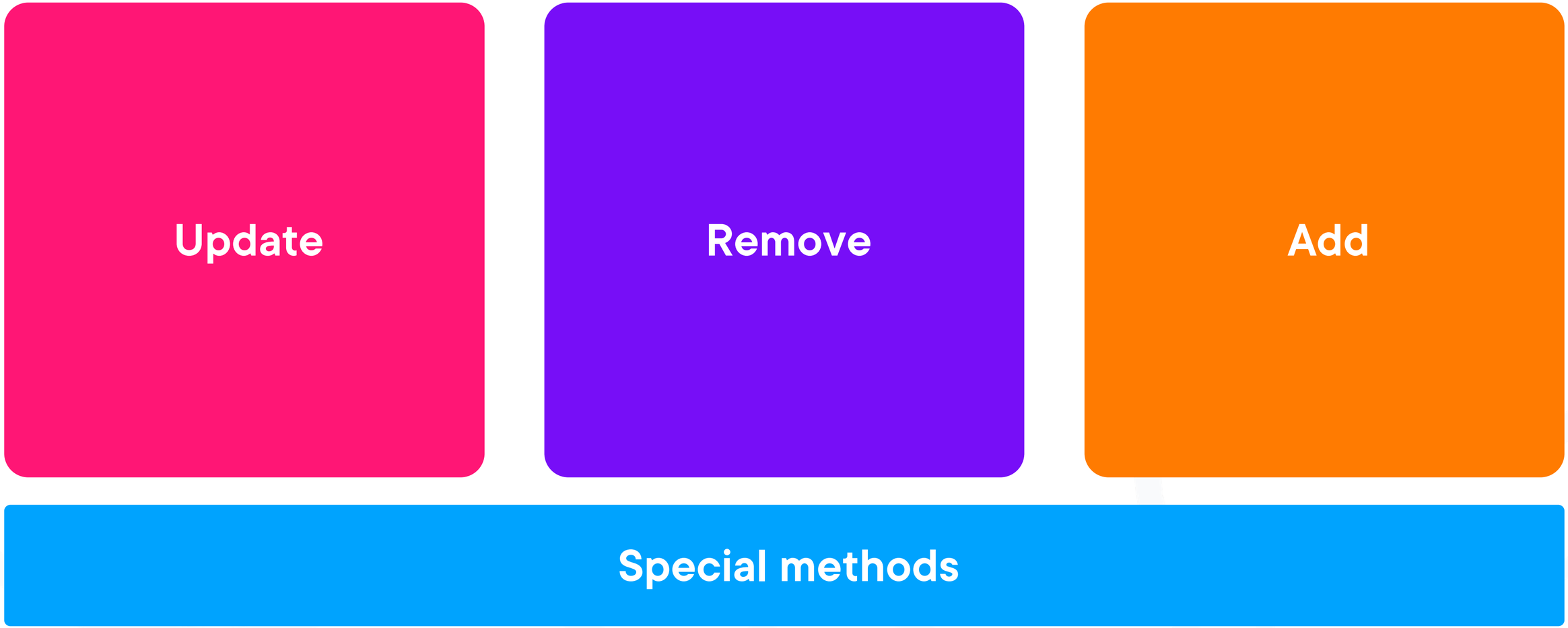

products
orange
inventory
price
1.5
stock
10
banana
inventory
price
0.5
stock
20

inventory['orange']

inventory['orange']

{'price': 1.5, 'stock': 10}

Methods



Unordered
Python version < 3.7

Ordered
Python version >= 3.7

Python Documentation

Demo

Create dictionaries

- Product names
- Stock quantity

Demo

Explore methods that don’t change the length of a dictionary

Demo

Methods

- Add elements
- Remove elements

Demo

Aliasing

Copying

Summary

Dictionaries

- Store data as key-value pair
- Keys must be unique and immutable
- Values accept duplicates and mutable objects

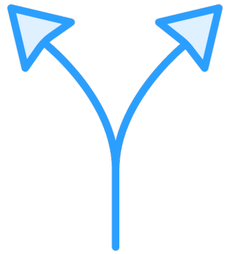
Methods

- update()
- del statement, pop() and, popitem()

Creating copies

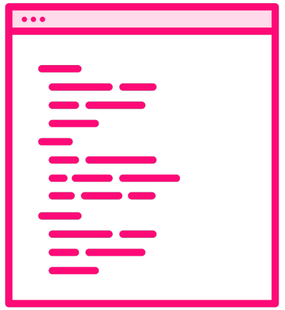
- Aliasing
- Copy()

Next Topics



Conditional statements

Data visualization



Custom functions

Thank you!

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