

## Notes: Python Fundamentals

Dataset is collection of data (a group of data)

Types

- List ←
  - Ordered
  - Changeable
  - Duplicates allowed
- Dictionary ←
  - Ordered
  - Changeable
  - Duplicates are NOT allowed
- Set
  - Unordered
  - Unchangeable\*
  - Duplicates are NOT allowed
- Tuple
  - Unordered
  - Unchangeable
  - Duplicates allowed

Column oriented: grouping by data

Row oriented: grouped by a single observation (good for acting on a single important feature)

Indexing:

- List ←
  - name[index/whole number]
- Dictionary ←
  - name[key] (example Pirate)
- Set
  - For loop
- Tuple
  - name[index]

Loops:

- For loops
  - 'for thing in collection'
    - 'statement'
- While loops
  - 'while condition'
    - 'statement'

## Useful Methods

### Dictionaries:

- `values()`
- `items()`
- `keys()`

### Lists:

- `len()`
- `append()`
- `sort()`

### Other:

- `range()`
- `print()`
- `split()`
- `type()`
- `int()`
- `str()`