# Exercises 03

Numpy, Pandas, OOP 1575

### Exercise 01

• Create an 3d numpy array with dimensions (4, 5, 3), and print the dimensions finally.

### Exercise 02

• change the shape of created array in the exercise 01 to (20, 3) and check the current dimensions!

# Exercise 03

• index and print the number 50 from the arr.

```
arr = np.array([[10, 20, 30, 40], [50, 60, 70, 80]])
```

### **Exercise 04**

• Change the element datatype of the arr to float!

```
arr = np.array([[10, 20, 30, 40], [50, 60, 70, 80]])
```

## **Exercise 05**

• join arr1 and arr2 into a single array!

```
arr1 = np.array([1, 2, 3])
arr2 = np.array([4, 5, 6])
```

## Exercise 06

• Load the dataset (cancer.csv)!

# Exercise 07

• Print an overview of the dataset.

## Exercise 08

• Print 13 last samples of the dataset.

## Exercise 09

• Print states with total rate of less than 200

### Exercise 10

• Print number of states with total rate of less than 200

### Exercise 11

• Print rows between 35 and 112, and columns between 14 to 28 (use iloc)

### Exercise 12

• print unique values of the Rates.Age.< 18 column!

# Exercise 13

• print mean of the Rates.Age.< 18

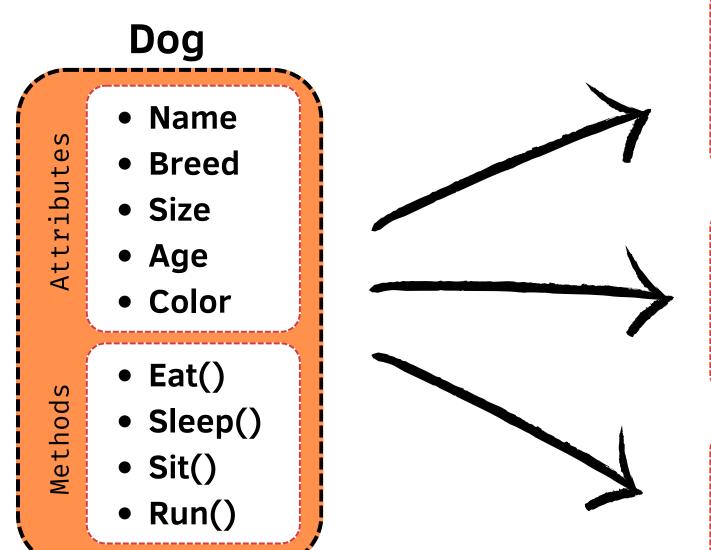
### **Exercise 14**

• Find max of Total.Population and subtract all values of Total.Population column from the maximum value using lambda function.

### Class and Object

### **Exercise 15**

- Implement following architecture using OOP!
- use <u>str</u> to print output same as: Breed of the dog is {Breed}, It is {Size} and {Color}, the dog is {Age} years old.



Name: Bella

Breed: Beaglier

Size: Small Age: 2 years

Color: red



Name: Max

Breed: Foxhound

Size: big

Age: 3 years Color: white



Name: Cooper

Breed: Beagle

Size: Medium Age: 2 years

Color: Brown

