

# Java 15 - Checkpoint #2

## Java Advanced

It is possible to implement constructors, setter, getters or any other additional method where it is considered necessary.

1. Declare an interface Food with the following methods:
  - getSatiety(): int
  - getGreasiness(): int
2. Declare a class Cutlery with the following attributes and methods:
  - dirtiness: int
  - onUse(Eatable): void
    - Increases dirtiness based on the return value of getGreasiness of the parameter.
3. Declare a class Person with the following attributes and methods:
  - hunger: int
  - eat(Eatable, Cutlery):
    - If the dirtiness of the cutlery is > 0, throw an exception.
    - Eats the Eatable, decreasing the value of hunger based on the return value of getSatiety(). hunger cannot be < 0.
    - calls onUse on the Cutlery object, passing the Eatable as parameter.
4. Implement the following Eatables:
  - Pasta: has a "quantity" integer attribute. satiety = quantity \* 2, greasiness = quantity \* 3
  - Apple: low satiety, low greasiness
  - Cake: low satiety, high greasiness
5. Implement a main method where the following operations are executed:
  - A Person object is allocated
  - Three Cutlery objects with names "fork", "knife" and "spoon"
  - An HashMap "menu" is allocated, with strings as keys and Eatables as values. The menu is the following:
    - "first\_course": a Pasta object.
    - "fruit": an Apple object.
    - "snack": a Cake object.
  - The person uses the fork to eat the first course, the knife to eat the fruit, and a spoon to eat the snack. After being consumed, the value is deleted from the map.

# SQL

Given the following table:

```
Car(  
    id VARCHAR(255) PRIMARY KEY,  
    nickname VARCHAR(64),  
    speed INTEGER,  
    productionYear INTEGER  
)
```

Write the following queries:

1. Insert a Car entry with random values.
2. Report the count of cars that have been manufactured in a certain year, for each year value present in the table.
3. Select all cars faster than 200.
4. Select all cars with a nickname, selecting only the nickname and their speed.