Todo IT – part 1

Topics:

- Object Oriented Programming
- Encapsulation
- Unit testing
- UML diagram

Overview:

This is the first part of three where you are going to build a Todo application.
This first part consists of building the first models (classes), where we put focus on **encapsulation** and **abstraction**. We will continue with this project in the following week so **when you are done** with this first step **do not add anything further**.

Requirements:

- Need to be a maven project.
- **Person.class**, **TodoItem.class** and **TodoItemTask.class** fully implemented according to specific requirements.
- **Person.class**, **TodoItem.class** and **TodoItemTask.class** tested with **Junit4** or **Junit5**

Good luck!

Person.class:

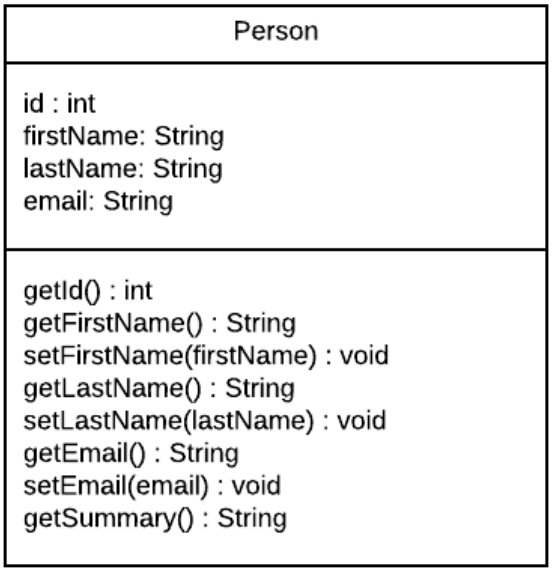
Fields:

- **id** (private) is an **int** representing each Person object.
- **firstName** (private) represents each person's first name. **Not allowed to be null**
- **lastName** (private) represents each person's last name. **Not allowed to be null**
- **email** (private) represents each person's email. **Not allowed to be null**

Constructor:
Up to you

Methods:

- Common getters and setters.
- *getSummary()* should return a **description of the object**. Like {id: 4, name: Nisse Olsson, email: nisse@gmail.com}



TodoItem.class:

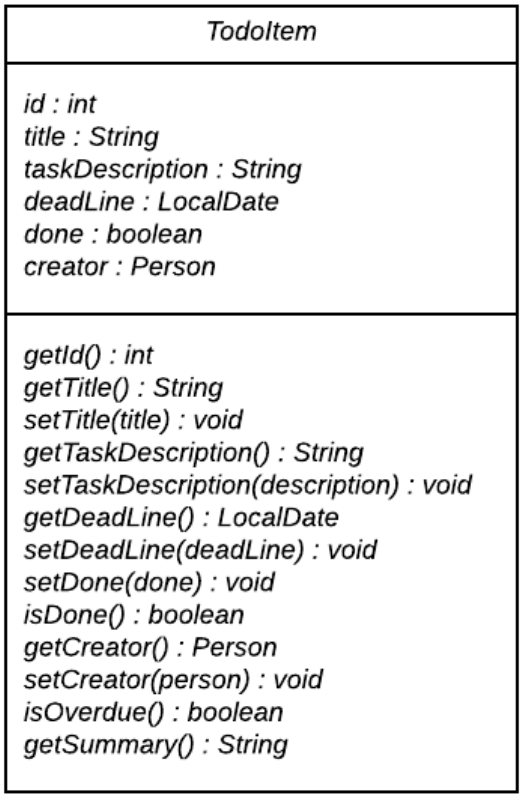
Fields:

- **id** (private) is an **int** representing each TodoItem object.
- **title** representing a title like 'Change tires.' **Not** allowed to be **null or empty**
- **description** is used to hold further information
- **deadLine** TodoItem is overdue if current date > deadline. **Not** allowed to be **null**
- **done** represent if task is finished
- **creator** represent who created this task.

Constructor:
Up to you

Methods:

- Common getters and setters
- *getSummary()* (see Person)
- *isOverdue()* should return **true** if current date has passed deadLine.



TodoItemTask.class

Fields:

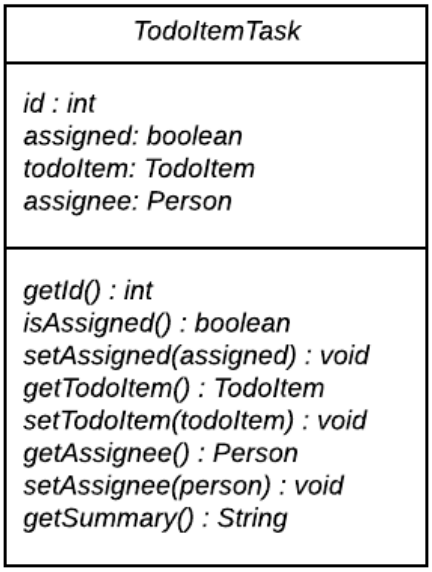
- **id** (private) is an **int** representing each TodoItemTask object
- **assigned** (private) set to true if assignee is not null
- **todoItem** (private) represent the details what assignee should do before deadline. **Not null**
- **assignee** (private) is the Person being assigned to do the Task.

Constructor:
Up to you

Methods:

- Common getters and setters
- *getSummary()* (see Person)

Tip: make sure boolean assigned is **encapsulated**



Full diagram: