Intro to Java

9 - Using Classes / Exercises: School Library

Exercises: the School Library

The school library contains 4 classes that model persons, among which there are students and teachers, and homework that teachers can assign to students and students can do.

Download and copy the classes in your workspace as described in the README file of the library.

People greeting each other

Ask the user how many people to create, then ask for the name of these people. For each person, create an instance of the class `Person`, giving it the name the user decided.

Note that `Person` constructor requires a `name` and a `surname`. Take the user input, split it at the first space encountered (search online how) to separate the name from the surname. Otherwise, use the first letter of the name followed by a dot as surname. *HINT*: save this code to a method for later reuse.

For every new person created, this person should present him-/herself using the `sayHi()` method.

In addition, the last person previously created should greet the new person using the `greet(...)` method and the new person should greet all the persons created so far. The first person should just present him-/herself.

Example:

```
How many people?

4

Marie Curie

Albert Einstein

Enrico Fermi

Stephen Hawking


Marie Curie: Hi, my name is Marie Curie

Albert Einstein: Hi, my name is Albert Einstein

Marie Curie: Good morning Albert

Albert Einstein: Good morning Marie
```

```
Enrico Fermi: Hi, my name is Enrico Fermi

Albert Einstein: Good morning Enrico

Enrico Fermi: Good morning Marie

Enrico Fermi: Good morning Albert

Stephen Hawking: Hi, my name is Stephen Hawking

Enrico Fermi: Good morning Stephen

Stephen Hawking: Good morning Marie

Stephen Hawking: Good morning Albert

Stephen Hawking: Good morning Enrico
```

Teacher giving homework to students

Ask the user the name for a teacher, and use it to instantiate a `Teacher`. The newly created teacher `sayHi()`.

Ask the user how many students to create, then ask for their names and use them to instantiate objects of the class `Student`. After creating all the students, they all `sayHi()`, in the order they're created.

For each student, ask the user for the text of an exercise. Create a `Homework` with this text and tell the teacher to assign it to the student. Repeat until every student has an exercise assigned.

When all the students get the assigned homework, they do their homework, via the method `doHomework()`.

Example:

```
Name of the teacher:

Max Mustermann


Max Mustermann: Hi, my name is Max Mustermann


How many students?

3

Lara L.

Jörg J.

Ines I.


Lara L.: Hi, my name is Lara L.
```

```
Jörg J.: Hi, my name is Jörg J.

Ines I.: Hi, my name is Ines I.


Homework for Lara?

Sort an array


Max Mustermann: Lara, please do the homework 'Sort an array'


Homework for Jörg?

Compare two strings


Max Mustermann: Jörg, please do the homework 'Compare two strings'


Homework for Ines?

Study object and classes


Max Mustermann: Ines, please do the homework 'Study object and classes'


Lara L.: doing my homework 'Sort an array' ...

Lara L.: ... done!

Jörg J.: doing my homework 'Compare two strings' ...

Jörg J.: ... done!

Ines I.: doing my homework 'Study object and classes' ...

Ines I.: ... done!
```

Made with ❤ by teachers at ReDI School.