

Design Patterns - TP3

```
<a href="https://github.com/IU-IPOD-F20/tp3-jmbruel">>CI
status</a></a> <a href="https://github.com/IU-IPOD-F20/tp3-
jmbruel">>CI status</a></a> <a href="https://github.com/IU-IPOD-
F20/tp3-jmbruel">>CI status</a></a> <a href="https://circleci.com/gh/IU-IPOD-F20/tp3-jmbruel">>IU-IPOD-F20</a></a>

```

TP3 initial code

This is a template for the students' assignments.



Course material:  <http://bit.ly/jmb-cpoa>

Assignment info

LAST NAME

DOE

First Name

John

Group #

☐ Teachers

☐ 1

☐ 2

☐ 3

☐ 4

☒ Innopolis

Requirements

You'll need:

☒ A [GitHub](#) account

☐ A [Git Bash](#) terminal (if you use Windows)



Try the following command in your terminal to check your **git** environment:

```
git config --global -l
```

Initial tasks

- ☒ Click on the Github Classroom link provided by your teacher (in fact, this should be done if you read this).
- ☐ Clone on your machine the Github project generated by Github Classroom.
- ☐ Modify the README file to add your last name, first name and group number.
- ☐ Commit and push using the following message:

 *commit/push*

```
fix #0 Initial task done
```



In the following, every time you'll see a **fix #...** text, make sure all your files are committed, and then push your modifications in the distant repo, making sure you used the corresponding message (**fix #...**) in one of the **commit** messages.



- If you want to check that you're really ready for **fix #0**, you can run the command in your shell: **make check**.
- If you want to list the Todos of the day, run **make todos**.

This TD exercise is inspired from the excellent **book**: "Head First: Design Pattern. Bert Bates, Eric Freeman, Elisabeth Freeman, Kathy Sierra. Editions O'Reilly. 2005."



The *Factory* pattern

QUESTION



- Fully implement the Pizzeria application so that:
 - it implements the Abstract Factory
 - it implements the Singleton (for the factory)
 - the test program below will produce the result below



Start by writing this program and use *QuickFix* to "generate" the code as much as possible.

Rendus attendus

ToDo



- ☐ a `pom.xml` that runs the tests of your application
- ☐ a `build.gradle` that runs the tests of your application
- ☐ the class diagram of your application, in a file named `TP3.plantuml`, placed in a `docs` folder in your repo.

We will use the following pizzas model:

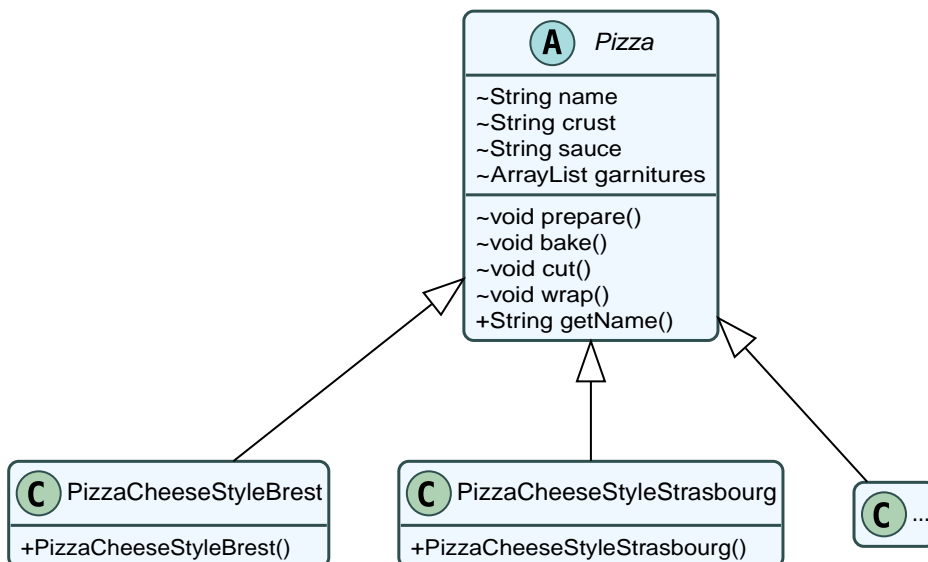


Diagram generated using <http://plantuml.sourceforge.net>.

Figure 1. Class diagram of the Pizzas

```
public class PizzaTestDrive {
    public static void main(String[] args) {
        Pizzeria shopFromBrest = PizzeriaFactory.getInstance().create("Brest");
        Pizzeria shopFromStrasbourg = PizzeriaFactory.getInstance().create
("Strasbourg");

        Pizza pizza = shopFromBrest.orderPizza("cheese");
        System.out.println("JMB has ordered a " + pizza.getName() + "\n");

        pizza = shopFromStrasbourg.orderPizza("cheese");
        System.out.println("JMI has ordered a " + pizza.getName() + "\n");
    }
}
```

Execution results

```
$ java -jar target/pizzeria-1.0.jar
Preparation of Pizza with Brest style sauce and cheese
Spread the pizza dough...
Add the sauce...
Add the garnitures:
  Parmigiano reggiano
Bake 25 minutes at 180 degrees
Cut the pizza in triangles
Put the pizza in the official box
JMB has ordered a Pizza with Brest style sauce and cheese
```

```
Preparation of Pizza Strasbourg style with cheese
Spread the pizza dough...
Add the sauce...
Add the garnitures:
  Mozzarella
Bake 25 minutes at 180 degrees
Cut in square portions
Put the pizza in the official box
JMI has ordered a Pizza Strasbourg style with cheese
```

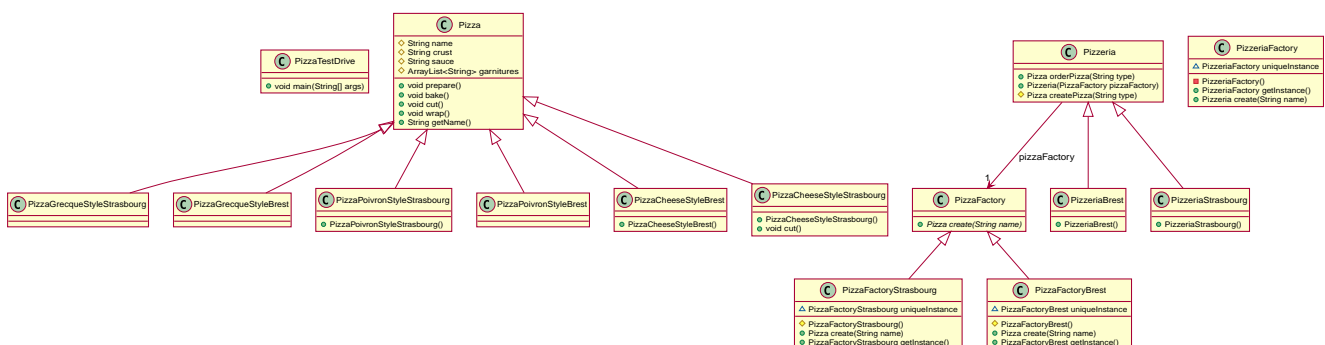


Figure 2. expected Structure



This assessment is graded. The autograding will run the tests via `gradle test` and `maven test`, as well as `test0` and the test of the model. This will constitute 80% of your grade. The remaining 20% will be evaluated by your TA and will focus on the tests (number and quality).

 `commit/push`

fix #All: Completed all duties

Contributors

- [Jean-Michel Bruel](#)

About...

Baked with [Asciidoctor](#) (version `2.0.11`) from 'Dan Allen', based on [AsciiDoc](#). 'Licence Creative Commons'.  [licence Creative Commons Paternité - Partage à l'Identique 3.0 non transposé](#).