RECRUITMENT TEST (JAVA DEVELOPER)

Note the following considerations before you start taking the test:

- We expect you to create a private repository on github or bitbucket and invite
jobs-tests@x-formation.com as a collaborator.
Then create a pull request without reviewers with your solutions.
Afterwards send an email with a repository link to our recruitment team - only then we will start reviewing your solution.
Keep in mind that proper submission is also part of the test - we will reject it if it is done in any other way.

- The usage of Maven in Java projects will be considered a plus.

TASK DESCRIPTIONS

1. Food ordering system
Imagine you have to design an application for a restaurant ordering system. Please follow the requirements listed below:
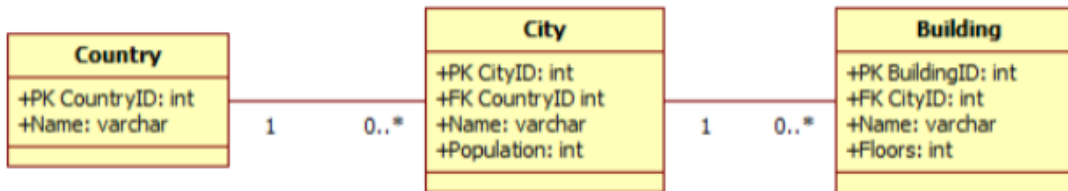
Functional requirements:
- It's possible to order lunch and/or drink.
- Lunch consists of a main course and dessert.
- Each meal and drink must have a name and price.
- There are three cuisines available to choose from (Polish, Mexican, Italian).
- When ordering a drink, the customer can additionally ask for ice cubes or/and lemon.

Non-functional requirements:
- It has to work "out of the box" without any additional requirements. We should be able to run it and place an order.
- Interactive command-line interface (no GUI).
- The solution you come up with should be extendable (it should be possible to add new cuisines/dishes in the future).
- It should contain unit tests.

Present your proposal of Java implementation for this application.

2. Consider the following data model:

Country
+PK CountryID: int
+Name: varchar

City
+PK CityID: int
+FK CountryID int
+Name: varchar
+Population: int

Building
+PK BuildingID: int
+FK CityID: int
+Name: varchar
+Floors: int

1   0..*   1   0..*

Write two SQL queries:
1. Select countries where the total number of inhabitants (population) in all cities is greater than 400.
2. Select names of the countries that have no buildings at all.