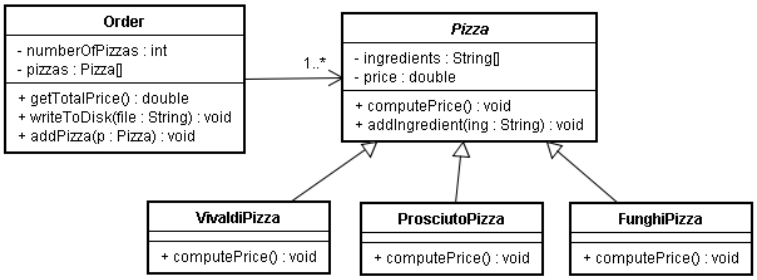
EXAM EXERCISE

Let us consider the information system of a pizzeria. Daily the pizzeria offer three kinds of pizzas: VivaldiPizza (15 ron), ProsciutoPizza (17 ron) or FunghiPizza (21 ron). Each Pizza has some default ingredients: ham, cheese, tomato etc.
The default ingredients can vary from day to day. At the daily setup of the system the pizza offer is found in a file "`menu.txt`" structured like in the followings:

```
VivaldiPizza,ham,onion,tomato
ProsciutoPizza,ham,cheese
FunghiPizza,mushroom,cheese
```

An order contains between 1 and 5 pizzas.
For the information system software `Order` and `Pizza` are two classes as in the following diagram. Moreover Pizza is an abstract class.



The `Order` class has the following attributes:

- `noOfPizzas (int)` How many pizzas there are in the order
- `pizzas (Pizza[])` The array of pizzas.

The `Order` has the following methods:

- `getTotalPrice:double` Returns the total price of the order by adding the prices of all pizzas in the array
- `add(p:Pizza)` Add a new pizza to the array
- `writeToDisk(file:String)` write in a file (whose the name is passed as an argument) the content of the `pizzas` array, one pizza on a line. For example, if you have an order with 3 pizzas the file should look like this:

```
VivaldiPizza,price=19
VivaldiPizza,price=17
FunghiPizza,price=21
Total price=57 ron
```

The `Pizza` class has the following attributes:

- `price` (a `double` value)
- `ingredients` (a `String[]`value)Each ingredient is a `String` value, a pizza can have up to 10 ingredients.

The client can add new ingredients with extra-cost. For example she/he can add mushroom to ProsciutoPizza. Each new ingredient costs 2 ron. The Pizza class implements this requirement using the `addIngredient(ing:String)` concret method.
The Pizza class has also an abstract methods `computePrice()`that returns the price of the pizza .
The subclasses implement their own `computePrice()` method in the following way: for `VivaldiPizza` and `FunghiPizza` the price is raised by 7% and 9% respectively and for `Prosciuto` the price is lowered by 5%

Write the classes `Order` ,`Pizza`, `VivaldiPizza`, `ProsciutoPizza` and `FunghiPizza` Write also a class `MainClass` with the method `main()` where you setup the menu by reading it from the `menu.txt` file and create an order of 3 pizzas of 2 kinds with various ingredients at your choice and finally write the results in a file whose the name is received as a command line argument.