

Factory Method Pattern

PROGRAMMING ASSIGNMENT 1

In this programming assignment, you are going to develop a part of a computer game to generate random items. The creation of these items should be done using a Factory Method.

First, you should create an abstract class named "Item." This class has two properties:

- Name (Type: String)
- Id (Type: int)

Additionally, the class has an abstract method called "useItem()." This method should be overridden in the respective subclass. There are no specific instructions for overriding the method (Tip: Simply output something appropriate on the console).

From the "Item" class, two classes should be derived: "Shield" and "Hammer". The "Shield" class has an additional property called "DefenseValue" of type int. The "Hammer" class has an additional property called "AttackValue" of type int.

If you recall the UML class diagram of the Factory Method Pattern, you already have the complete product hierarchy with the classes mentioned here. Now, you need to program the corresponding creator hierarchy. There should be a method among others with which one can generate a random item. Otherwise, you can program the complete creator hierarchy according to your own wishes.

Good luck!

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