## Animal Farm

You should be familiar with encapsulation already. For this problem, you’ll need to create class called **Chicken**. Chicken should contain several **fields**, a **constructor**, and several **methods**. Your task is to encapsulate or hide anything that is not intended to be viewed or modified from outside the class.

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| **Chicken** | |
| - | name: String |
| - | age: int |
| + | Chicken(String, int) |
| - | setName(String) : void |
| - | setAge (int): void |
| + | productPerDay (): double |
| + | toString(): Override |
| - | calculateProductPerDay() : double |

Chicken lives for **15 years**. Chicken have **name** for sure, at least **1 symbol** long. Chicken producing eggs:

* First 6 years it produces 2 eggs per day [0 - 5]
* Next 6 years it produces 1 egg per day [6 - 11]
* And after that it produces 0.75 eggs per day

### Step 1. Encapsulate Fields

Fields should be **private**. Leaving fields open for modification from outside the class is potentially dangerous. Make all fields in the Chicken class private.

In case the value inside a field is needed elsewhere, use **getters** to reveal it.

### Step 2. Ensure Classes Have a Correct State

Having **getters and setters** is useless if you don’t actually use them. The Chicken constructor modifies the fields directly which is wrong when there are suitable setters available. Modify the constructor to fix this issue.

### Step 3. Validate Data Properly

Validate the chicken’s **name** (it cannot be null, empty or whitespace). In case of **invalid name**, print exception message **"Name cannot be empty."**

Validate the **age** properly, minimum and maximum age are provided, make use of them. In case of **invalid age**, print exception message **"Age should be between 0 and 15."**

### Step 4. Hide Internal Logic

If a method is intended to be used only by descendant classes or internally to perform some action, there is no point in keeping them **public**. The **calculateProductPerDay()** method is used by the **productPerDay()** public method. This means the method can safely be hidden inside the Chicken class by declaring it **private**.

### Step 4. Submit Code to Judge

Submit your code as a **zip file** in Judge. Make sure you have a **public Main class** with a **public static void main** method in it.

### Examples

|  |  |
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| **Input** | **Output** |
| Mara  10 | Chicken Mara (age 10) can produce 1.00 eggs per day. |
| Mara  17 | Age should be between 0 and 15. |
| Gosho  6 | Chicken Gosho (age 6) can produce 1.00 eggs per day. |