public Homework_1 EEM 480(private knowledge your_one)

The aim of this homework is to get acquainted to OOP programming concepts. Here you are required to write a program which helps a lot the banking system in ARCHENON Galaxy Trade Ministry.

This Project has been requested from ARCHENON Galaxy, where two different habitants, Gallions and Kubaras, are settled. Unfortunately, Gallions have 9 fingers, and Kubaras have 7 fingers and they had their own base number systems according to their number of fingers. So Gallions use 9 base system in their currencies named Galli and Kubaras use 7 base system and their currency unit is Kuba. Of course, this causes trouble on their trades. Unfortunately, we can (humans) only understand base 10 numbers. So every Galli operation or Kuba operation initially has to be converted to base 10 system and reconverted to their appropriate base again. Here it is requested that a program which does the following requirements.

- Two different Galli currency will be added and result will be Galli as :
  (If Gallions use base 5 system)
  - 42 + 23 = 120
  - Where $(42)_5 = (22)_{10}, (23)_5 = (13)_{10}$
    $(22)_{10} + (13)_{10} = (35)_{10} = (120)_5$
- Similarly, two Kuba currencies will be added and the result will be Kuba.
- Two different Galli currencies will be subtracted, and result will be Galli
- Two different Kuba currencies will be subtracted, and result will be Kuba.
- A Galli currency will be added to Kuba currency, and the result will be Galli.
- A Kuba currency will be added to Galli currency and the result will be Kuba.
- Galli unit will be converted to Kuba unit
- Kuba unit will be converted to Galli unit.
  - (Note. In ARCHENON, it has been assigned that $1(Kuba)_{10} = 2(Galli)_{10}$)
- The user can enter either Kuba or Galli using their keyboard. However, the keyboard they use are taken from the world, and on their keyboards, there are unused numbers (9 for Gallions and 7,8,9 for Kubaras), So an initial check is necessary to have correct input.

Here are the class definitions :

```
public class Galli{
    private Integer Currency;

    public void Add(Galli newGalli){
        //Add your code here
    }
    public void Add(Kuba newKuba){
        //Add your code here
    }

    public void GetCurrency(){
        //User can enter Currency but check it
    }
    public void GetCurrency(Integer newGalli){
        //User can enter Currency but check it
    }
    public void ShowCurrency(){
        //Put the Currency to the screen
    }
    public void Subtract(Galli newGalli){
        //Add your code here
    }
    Public Kuba Convert(){
        //Add your code here
    }
}
```

```
public class Kuba {
    private Integer Currency;


    public void Add(Kuba newKuba){
        //Add your code here
    }
    public void Add(Galli newGalli){
        //Add your code here
    }
    public void GetCurrency(){
        //User can enter Currency but check it
    }
    public void GetCurrency(Integer newKuba){
        //User can enter Currency but check it
    }
    public void ShowCurrency(){
        //Put the Currency to the screen
    }
    public void Subtract(Kuba newKuba){
        //Add your code here
    }
    public Galli Convert(){
        //Add your code here
    }
}
```

Rules for HW Submission

. You have to write your HW in the NetBeans environment.
. You have to write a report with the name "**Report_HW1.pdf**" explaining your HW (purpose, how did you solve it, algorithm, etc.) and the environment you used (NetBeans, for example). The person who reads your report can easily use the class you have written.
. Submission should be in the form of a zip. When extracted, the result should be a single folder with the name "HW1".
. Don't forget to put your report into the zip file.
. The name of your project will be "**Name_Surame_HW1**. e.g., *Lutfullah_Arici_HW1*. If you do not obey the rule, I will not grade your homework.
. You have to bundle your whole project folder into your HW1.zip file.
. If I extract your project file, then import it to my environment, and if it doesn't work, you will be graded on 30, not 100. (Double check. It saves life)
. Do HW by yourself. Be honest.