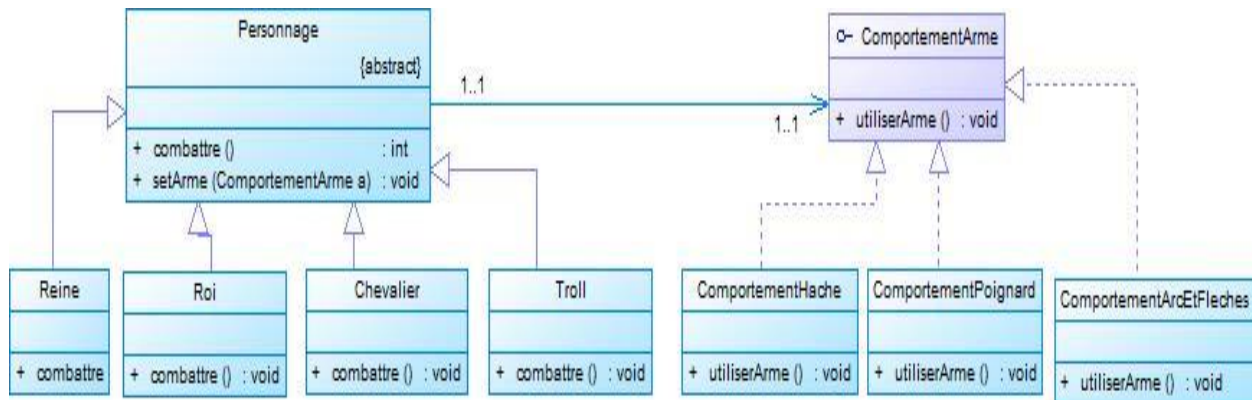


TP : Design pattern Strategy

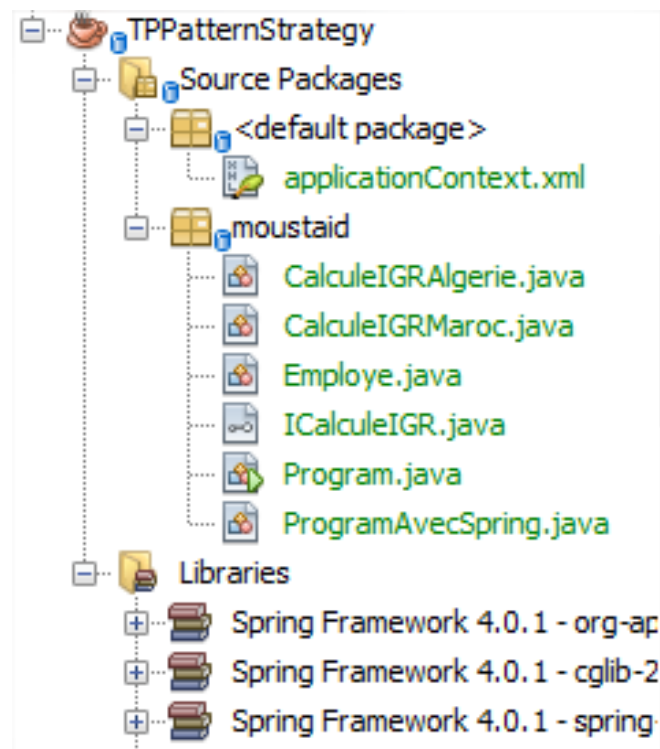
Ayoub MOUSTAID - GLSID2
Année universitaire : 2015/2016

Problème de conception « Armes »

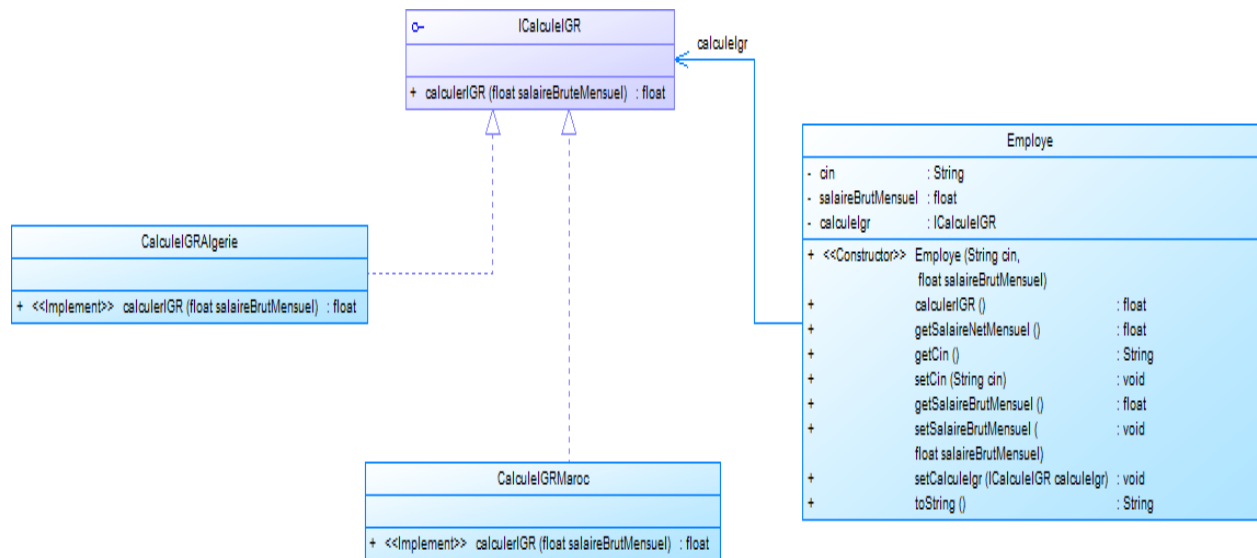


Structure (calcul de l'IGR)

- IDE : Netbeans - Architecture



- Diagramme de classes



Implémentation

- Classe Employe

```

package moustaid;
/**
 *
 * @author Ayoub MOUSTAID
 */
public class Employe{
    private String cin;
    private float salaireBrutMensuel;
    private ICalculeIGR calculelgr;

    public Employe(String cin, float salaireBrutMensuel) {
        this.cin= cin;
        this.salaireBrutMensuel= salaireBrutMensuel;
    }
    //la methode qui va subir le changement
    public float calculerIGR(){
        return calculelgr.calculerIGR(this.salaireBrutMensuel);
    }
  
```

```

public float getSalaireNetMensuel(){
float igr=calculerIGR();
float salaireNetAnuel=salaireBrutMensuel*12-igr;
return salaireNetAnuel/12;
}
// Getters et Setters

public String getCin() {
    return cin;
}

public void setCin(String cin) {
    this.cin = cin;
}

public float getSalaireBrutMensuel() {
    return salaireBrutMensuel;
}

public void setSalaireBrutMensuel(float salaireBrutMensuel) {
    this.salaireBrutMensuel = salaireBrutMensuel;
}

public void setCalculeIgr(ICalculeIGR calculeIgr) {
    this.calculeIgr = calculeIgr;
}

@Override
public String toString() {
    return "Employe{" + "cin=" + cin + ", salaireBrutMensuel=" + salaireBrutMensuel + '}';
}
}

```

- Interface ICalculeIGR

```
package moustaïd;

/**
 *
 * @author Ayoub MOUSTAID
 */
public interface ICalculeIGR {
    public float calculerIGR(float salaireBruteMensuel);
}
```

- Classe CalculeIGRMaroc

```
package moustaïd;

/**
 *
 * @author Ayoub MOUSTAID
 */
public class CalculeIGRMaroc implements ICalculeIGR{

    @Override
    public float calculerIGR(float salaireBrutMensuel) {
        float salaireBrutAnnuel=salaireBrutMensuel*12;
        float taux=42;

        if(salaireBrutAnnuel<40000)
            taux=5;
        else if (salaireBrutAnnuel>=40000 && salaireBrutAnnuel<120000)
            taux=20;

        return salaireBrutAnnuel*taux/100;

    }

}
```

- Classe CalculelGRAlgerie

```
package moustaid;

/**
 *
 * @author Ayoub MOUSTAID
 */
public class CalculelGRAlgerie implements ICalculelGR{

    @Override
    public float calculerlGR(float salaireBrutMensuel) {
        return salaireBrutMensuel*12*35/100;
    }

}
```

- Classe Program

```
package moustaid;

/**
 *
 * @author Ayoub MOUSTAID
 */
public class Program {
    public static void main(String[] args) {
        Employe emp1=new Employe("QB2223", 5000);
        emp1.setCalculelgr(new CalculelGRMaroc());
        System.out.println(emp1+"", SalaireNetMensuel = "+emp1.getSalaireNetMensuel());

        Employe emp2=new Employe("EM399", 1500);
        emp2.setCalculelgr(new CalculelGRAlgerie());
        System.out.println(emp2+"", SalaireNetMensuel = "+emp2.getSalaireNetMensuel());

    }
}
```

- Resultat

```

Employee emp1=new Employee("QB2223", 5000);
emp1.setCalculeIgr(new CalculeIGRMaroc());
System.out.println(emp1+" , SalaireNetMensuel = "+emp1.getSalaireNetMensuel());

Employee emp2=new Employee("EM399", 1500);
emp2.setCalculeIgr(new CalculeIGRAlgerie());
System.out.println(emp2+" , SalaireNetMensuel = "+emp2.getSalaireNetMensuel());

}
}

```

I

Repository Browser	Git - 10 Files [Netbeans] - master	Notifications	Output X	Search Results
<div> <div>PPatternStrategy (run) X</div> <div>Retriever Output X</div> </div> <pre> run: Employee{cin=QB2223, salaireBrutMensuel=5000.0}, SalaireNetMensuel = 2900.0 Employee{cin=EM399, salaireBrutMensuel=1500.0}, SalaireNetMensuel = 975.0 BUILD SUCCESSFUL (total time: 3 seconds) </pre>				

- applicationContext (Spring)

```

<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:context="http://www.springframework.org/schema/context"
  xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-4.0.xsd
  http://www.springframework.org/schema/context
http://www.springframework.org/schema/context/spring-context-4.0.xsd"
  >
  <bean id="calcule" class="moustaid.CalculeIGRMaroc"></bean>
</beans>

```

- Classe ProgramAvecSpring (version Spring)

```
package moustaïd;
import org.springframework.context.support.ClassPathXmlApplicationContext;
/**
 *
 * @author Ayoub MOUSTAID
 */
public class ProgramAvecSpring {
    public static void main(String[] args) {
        ClassPathXmlApplicationContext context= new ClassPathXmlApplicationContext(new
String[]{"applicationContext.xml"});

        Employe emp1=new Employe("QB2223", 5000);
        emp1.setCalculerIgr((ICalculerIGR)context.getBean("calculer"));
        System.out.println(emp1+" , SalaireNetMensuel = "+emp1.getSalaireNetMensuel());

        Employe emp2=new Employe("EM399", 1500);
        emp2.setCalculerIgr((ICalculerIGR)context.getBean("calculer"));
        System.out.println(emp2+" , SalaireNetMensuel = "+emp2.getSalaireNetMensuel());
    }
}
```

- Resultat

```
public class ProgramAvecSpring {
    public static void main(String[] args) {
        ClassPathXmlApplicationContext context= new ClassPathXmlApplicationContext(new String[]{"applicationContext.xml"});

        Employe emp1=new Employe("QB2223", 5000);
        emp1.setCalculerIgr((ICalculerIGR)context.getBean("calculer"));
        System.out.println(emp1+" , SalaireNetMensuel = "+emp1.getSalaireNetMensuel());

        Employe emp2=new Employe("EM399", 1500);
        emp2.setCalculerIgr((ICalculerIGR)context.getBean("calculer"));
        System.out.println(emp2+" , SalaireNetMensuel = "+emp2.getSalaireNetMensuel());
    }
}
```

Repository Browser	Git - 10 Files [Netbeans] - master	Notifications	Output ×	Search Results
<div> <div>PatternStrategy (run) ×</div> <div>Retriever Output ×</div> </div> <pre>run: Mar 10, 2016 6:36:20 PM org.springframework.context.support.AbstractApplicationContext prepareRefresh INFO: Refreshing org.springframework.context.support.ClassPathXmlApplicationContext@5910e440: startup date [Thu Mar 10 18:36:20 WET 2016]; root Mar 10, 2016 6:36:21 PM org.springframework.beans.factory.xml.XmlBeanDefinitionReader loadBeanDefinitions INFO: Loading XML bean definitions from class path resource [applicationContext.xml] Employe(cin=QB2223, salaireBrutMensuel=5000.0), SalaireNetMensuel = 2900.0 Employe(cin=EM399, salaireBrutMensuel=1500.0), SalaireNetMensuel = 1425.0 BUILD SUCCESSFUL (total time: 3 seconds)</pre>				