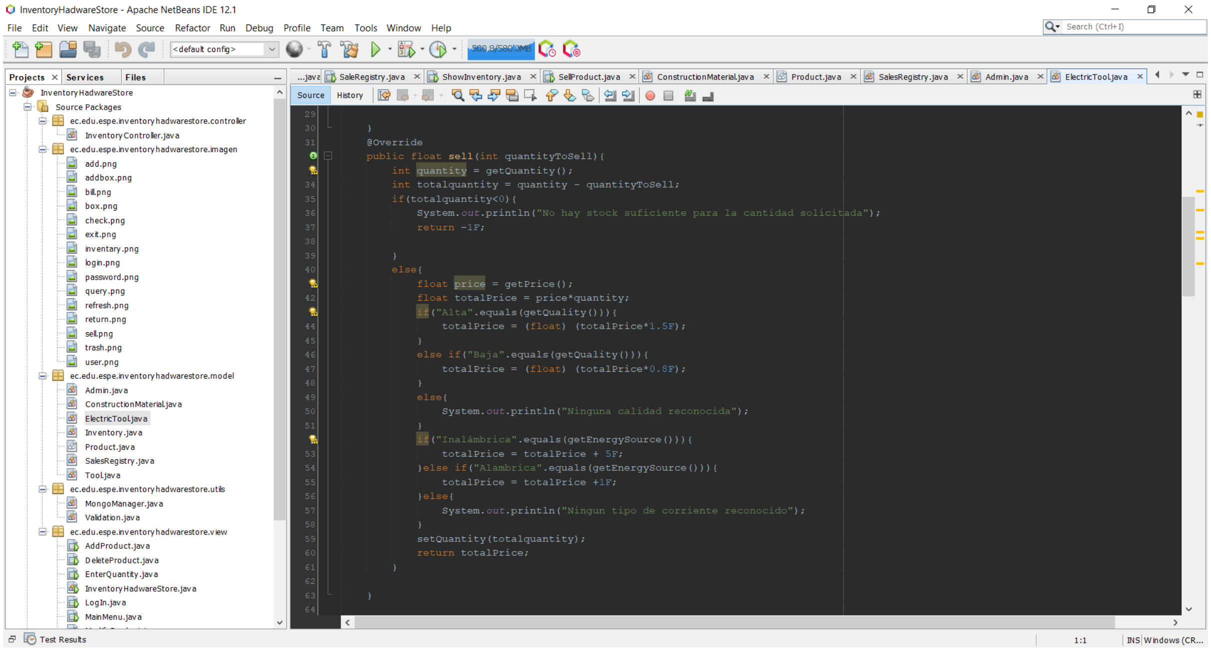
SOLID of team 5 - inventory Hardware Store

Single-responsibility principle

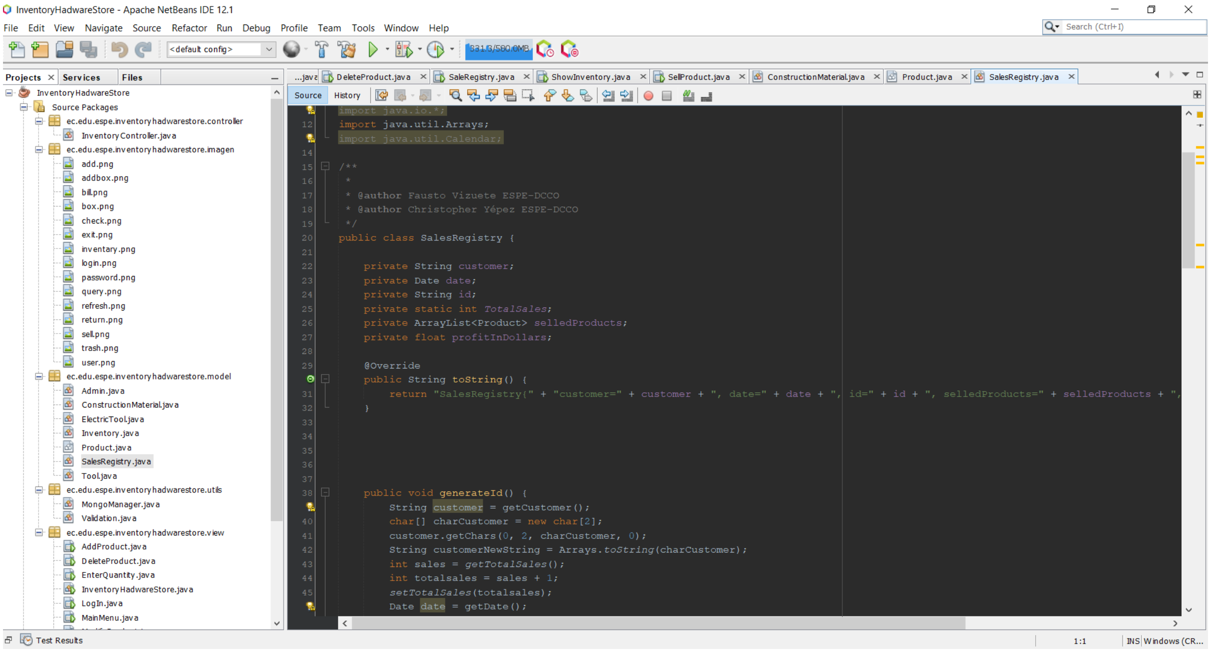
Model Package

- In the class electric tool there should only be a way to save the item, but there is also a validation about the quality of the product.


InventoryHadwareStore - Apache NetBeans IDE 12.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
...java SaleRegistry.java ShowInventory.java SellProduct.java ConstructionMaterial.java Product.java SalesRegistry.java Admin.java ElectricTool.java
Source History
Test Results

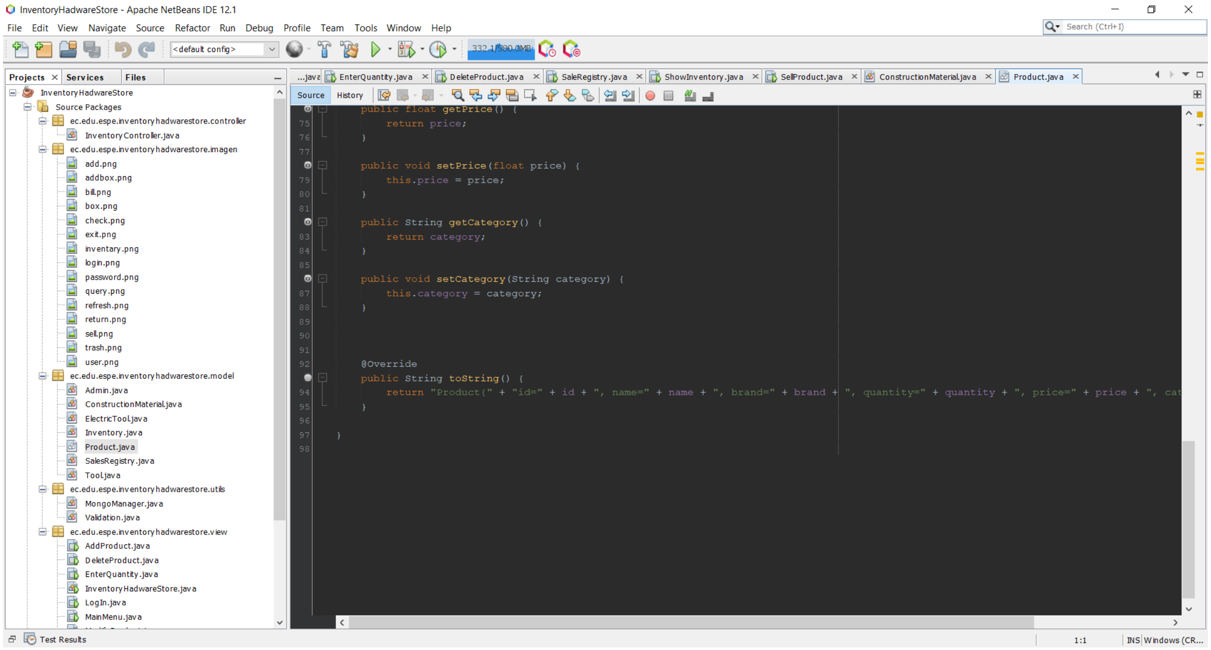
```
    }
    @Override
    public float sell(int quantityToSell){
        int quantity = getQuantity();
        int totalquantity = quantity - quantityToSell;
        if(totalquantity<0){
            System.out.println("No hay stock suficiente para la cantidad solicitada");
            return -1F;

        }
        else{
            float price = getPrice();
            float totalPrice = price*quantity;
            if("Alta".equals(getQuality())){
                totalPrice = (float) (totalPrice*1.5F);
            }
            else if("Baja".equals(getQuality())){
                totalPrice = (float) (totalPrice*0.8F);
            }
            else{
                System.out.println("Ninguna calidad reconocida");
            }
            if("Inalámbrica".equals(getEnergySource())){
                totalPrice = totalPrice + 5F;
            }else if("Alambrica".equals(getEnergySource())){
                totalPrice = totalPrice +1F;
            }else{
                System.out.println("Ningun tipo de corriente reconocido");
            }
            setQuantity(totalquantity);
            return totalPrice;
        }

    }
```

- In class SalesRegistry the Constructor must go before the ToString


InventoryHadwareStore - Apache NetBeans IDE 12.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
...java DeleteProduct.java SaleRegistry.java ShowInventory.java SellProduct.java ConstructionMaterial.java Product.java SalesRegistry.java
Source History
Test Results

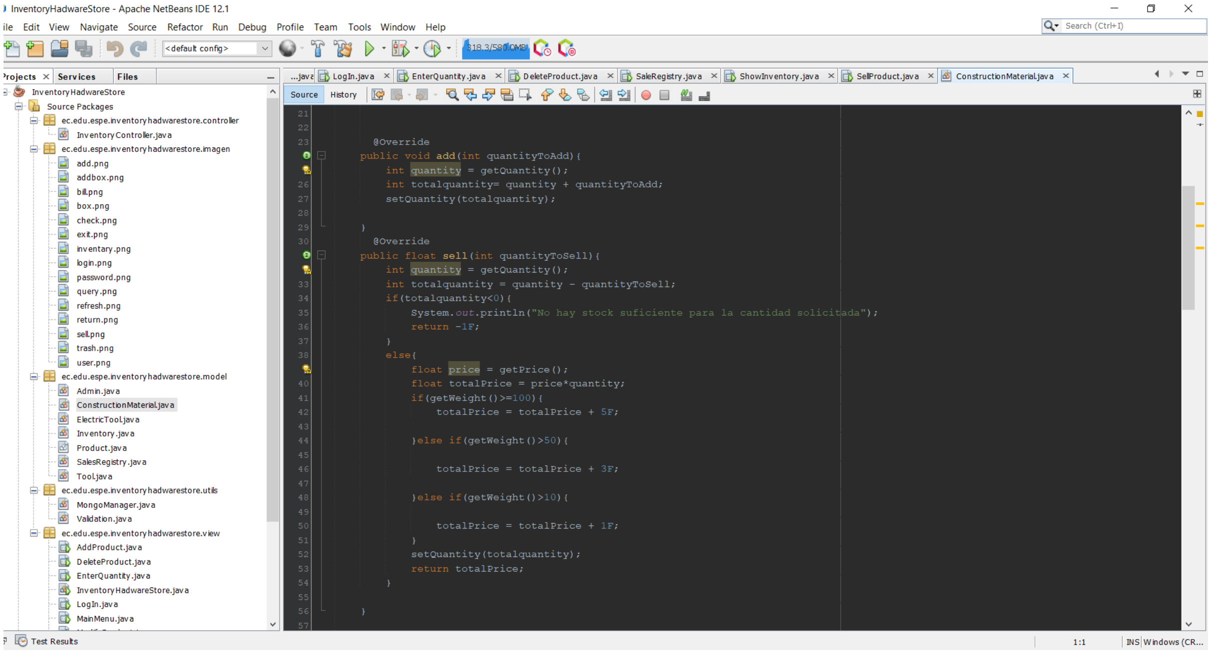
```
import java.io.*;
import java.util.Arrays;
import java.util.Calendar;

/**
 *
 * @author Fausto Vizuete ESPE-DCCO
 * @author Christopher Yépez ESPE-DCCO
 */
public class SalesRegistry {

    private String customer;
    private Date date;
    private String id;
    private static int TotalSales;
    private ArrayList<Product> selledProducts;
    private float profitInDollars;

    @Override
    public String toString() {
        return "SalesRegistry{" + "customer=" + customer + ", date=" + date + ", id=" + id + ", selledProducts=" + selledProducts + ",
    }





    public void generateId() {
        String customer = getCustomer();
        char[] charCustomer = new char[2];
        customer.getChars(0, 2, charCustomer, 0);
        String customerNewString = Arrays.toString(charCustomer);
        int sales = getTotalSales();
        int totalsales = sales + 1;
        setTotalSales(totalsales);
        Date date = getDate();
```

- In class Product the ToString must go before the getters and setters



```java
    public float getPrice() {
        return price;
    }

    public void setPrice(float price) {
        this.price = price;
    }

    public String getCategory() {
        return category;
    }

    public void setCategory(String category) {
        this.category = category;
    }



    @Override
    public String toString() {
        return "Product{" + "id=" + id + ", name=" + name + ", brand=" + brand + ", quantity=" + quantity + ", price=" + price + ", cat
    }

}
```

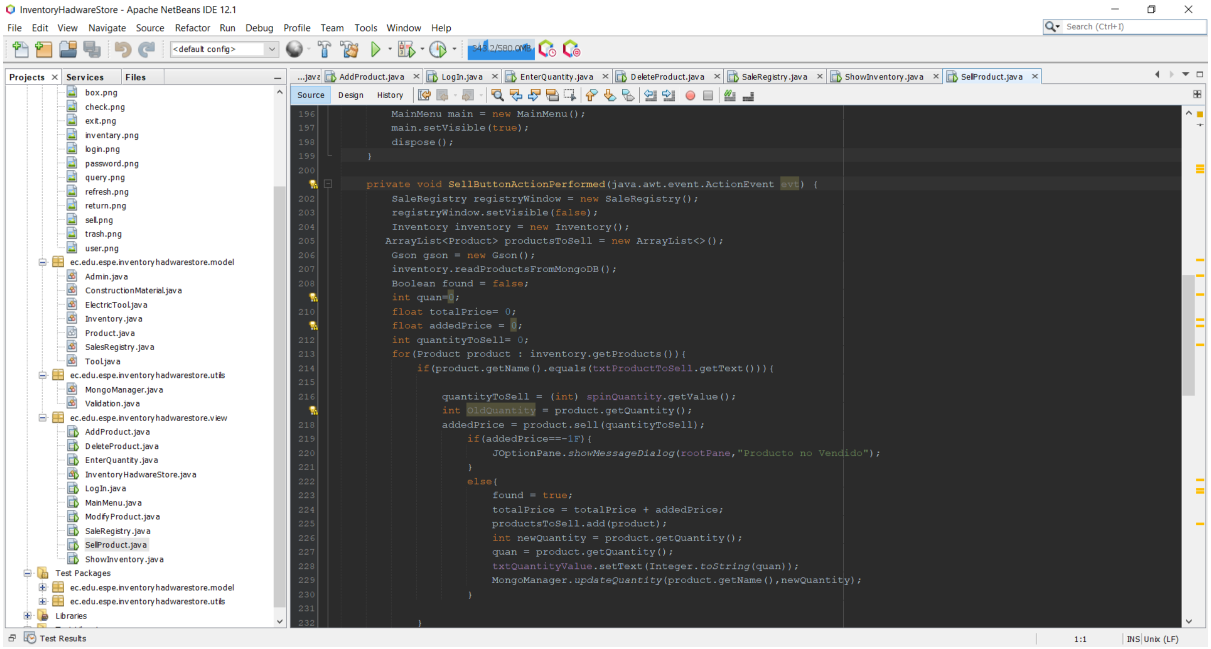
- The class ConstructionMaterial should not sell the products, the class should just create the information itself.



```java


      @Override
    public void add(int quantityToAdd){
        int quantity = getQuantity();
        int totalquantity= quantity + quantityToAdd;
        setQuantity(totalquantity);

    }
      @Override
    public float sell(int quantityToSell){
        int quantity = getQuantity();
        int totalquantity = quantity - quantityToSell;
        if(totalquantity<0){
            System.out.println("No hay stock suficiente para la cantidad solicitada");
            return -1F;
        }
        else{
            float price = getPrice();
            float totalPrice = price*quantity;
            if(getWeight()>=100){
                totalPrice = totalPrice + 5F;

            }else if(getWeight()>50){

                totalPrice = totalPrice + 3F;

            }else if(getWeight()>10){

                totalPrice = totalPrice + 1F;
            }
            setQuantity(totalquantity);
            return totalPrice;
        }

    }
```

View Package

- The Gson object is found in some classes and do not use methods in each of its buttons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File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
...java AddProduct.java LogIn.java EnterQuantity.java DeleteProduct.java SaleRegistry.java ShowInventory.java SellProduct.java
Source Design History
ec.edu.espe.inventoryhadwarestore.model
ec.edu.espe.inventoryhadwarestore.utils
ec.edu.espe.inventoryhadwarestore.view
Test Packages
Libraries
Test Results

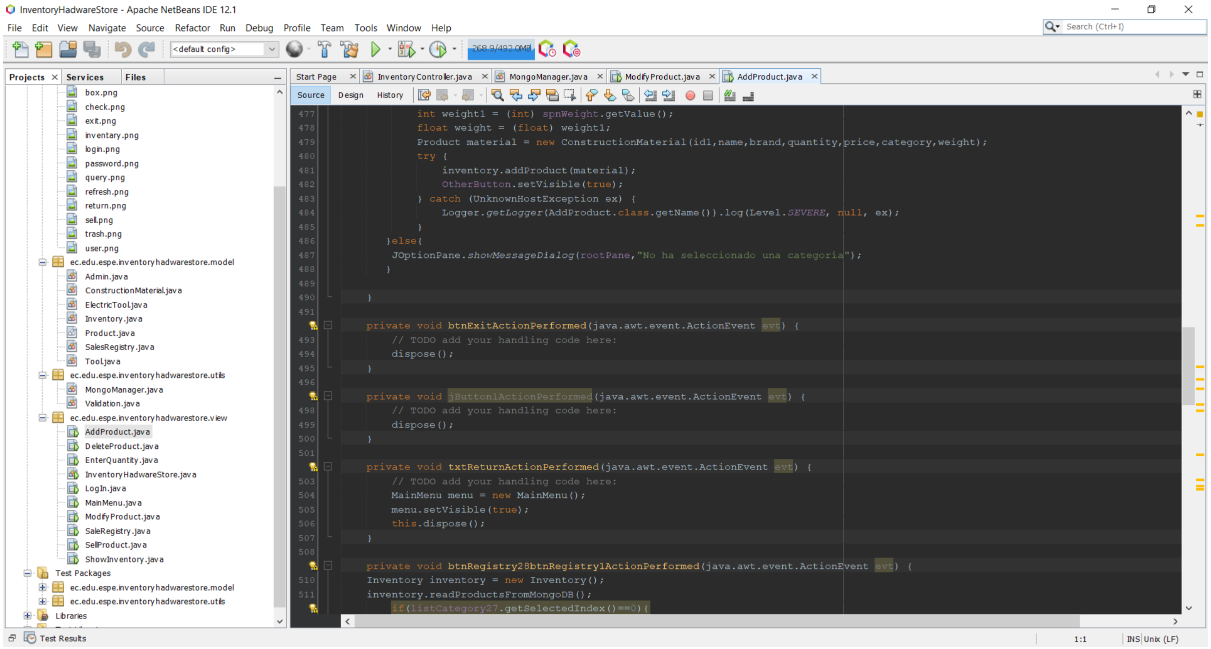
```
            MainMenu main = new MainMenu();
            main.setVisible(true);
            dispose();
        }

    private void SellButtonActionPerformed(java.awt.event.ActionEvent evt) {
        SaleRegistry registryWindow = new SaleRegistry();
        registryWindow.setVisible(false);
        Inventory inventory = new Inventory();
       ArrayList<Product> productsToSell = new ArrayList<>();
        Gson gson = new Gson();
        inventory.readProductsFromMongoDB();
        Boolean found = false;
        int quan=0;
        float totalPrice= 0;
        float addedPrice = 0;
        int quantityToSell= 0;
        for(Product product : inventory.getProducts()){
            if(product.getName().equals(txtProductToSell.getText())){

                quantityToSell = (int) spinQuantity.getValue();
                int OldQuantity = product.getQuantity();
                addedPrice = product.sell(quantityToSell);
                    if(addedPrice==-1F){
                        JOptionPane.showMessageDialog(rootPane,"Producto no Vendido");
                    }
                    else{
                        found = true;
                        totalPrice = totalPrice + addedPrice;
                        productsToSell.add(product);
                        int newQuantity = product.getQuantity();
                        quan = product.getQuantity();
                        txtQuantityValue.setText(Integer.toString(quan));
                        MongoManager.updateQuantity(product.getName(),newQuantity);
                    }

            }
```

- AddProduct.In this class you have programmed in the buttons do not work with methods, in the design of the FRM you have a double screen that is not functional.


InventoryHadwareStore - Apache NetBeans IDE 12.1
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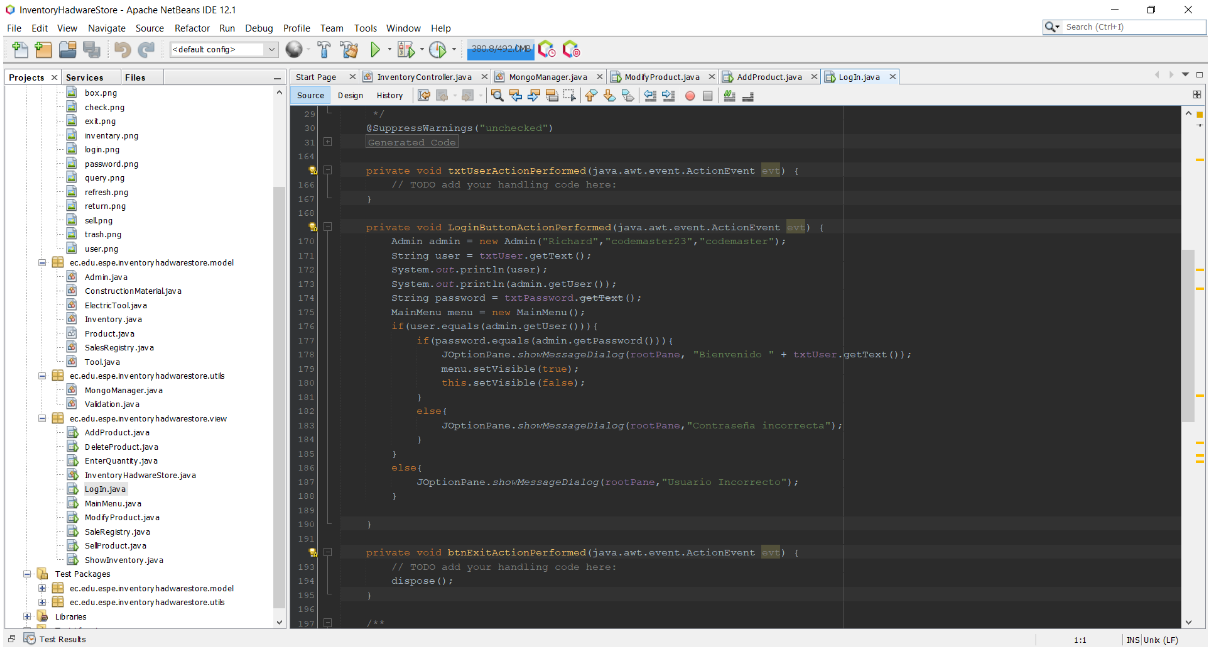
Projects Services Files
Start Page InventoryController.java MongoManager.java ModifyProduct.java AddProduct.java
Source Design History
Test Results

```
                int weight1 = (int) spnWeight.getValue();
                float weight = (float) weight1;
                Product material = new ConstructionMaterial(id1,name,brand,quantity,price,category,weight);
                try {
                    inventory.addProduct(material);
                    OtherButton.setVisible(true);
                } catch (UnknownHostException ex) {
                    Logger.getLogger(AddProduct.class.getName()).log(Level.SEVERE, null, ex);
                }
            }else{
             JOptionPane.showMessageDialog(rootPane,"No ha seleccionado una categoría");
            }

        }

    private void btnExitActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        dispose();
    }

    private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        dispose();
    }

    private void txtReturnActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        MainMenu menu = new MainMenu();
        menu.setVisible(true);
        this.dispose();
    }

    private void btnRegistry28btnRegistry1ActionPerformed(java.awt.event.ActionEvent evt) {
    Inventory inventory = new Inventory();
    inventory.readProductsFromMongoDB();
        if(listCategory27.getSelectedIndex()==0){
```

- Logging in this class the validation of the user and the password is being done locally.


InventoryHadwareStore - Apache NetBeans IDE 12.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
Start Page InventoryController.java MongoManager.java ModifyProduct.java AddProduct.java LogIn.java
Source Design History
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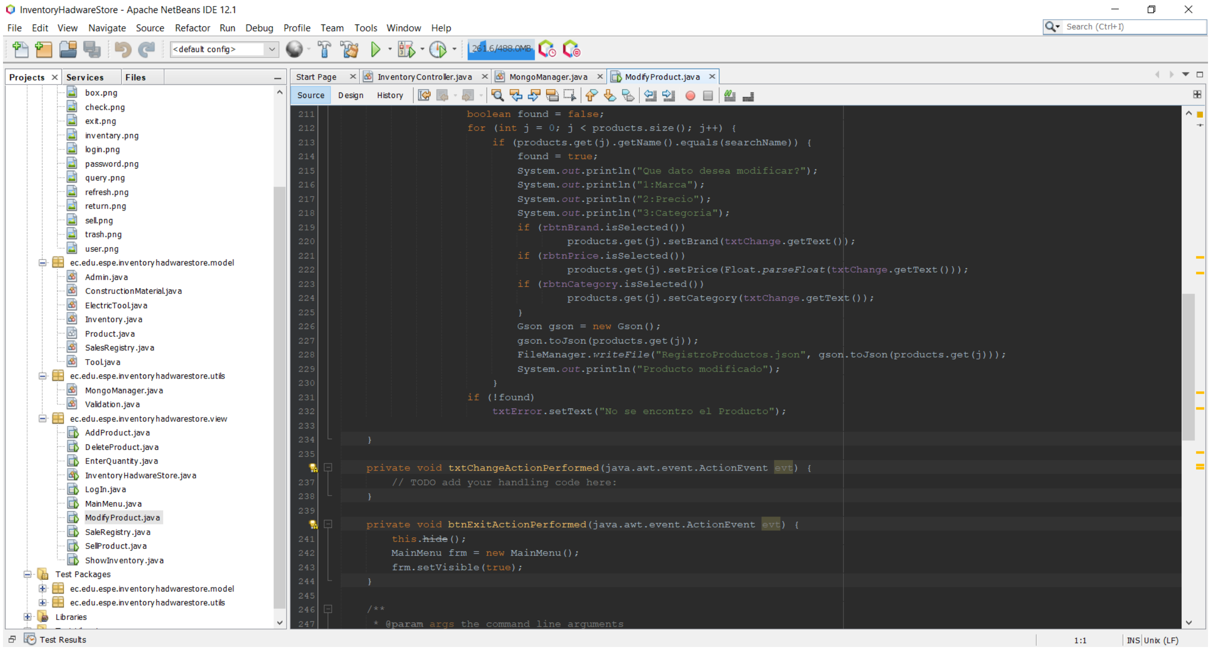
```java
     */
    @SuppressWarnings("unchecked")
    Generated Code

    private void txtUserActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void LoginButtonActionPerformed(java.awt.event.ActionEvent evt) {
        Admin admin = new Admin("Richard","codemaster23","codemaster");
        String user = txtUser.getText();
        System.out.println(user);
        System.out.println(admin.getUser());
        String password = txtPassword.getText();
        MainMenu menu = new MainMenu();
        if(user.equals(admin.getUser())){
            if(password.equals(admin.getPassword())){
                JOptionPane.showMessageDialog(rootPane, "Bienvenido " + txtUser.getText());
                menu.setVisible(true);
                this.setVisible(false);
            }
            else{
                JOptionPane.showMessageDialog(rootPane,"Contraseña incorrecta");
            }
        }
        else{
            JOptionPane.showMessageDialog(rootPane,"Usuario Incorrecto");
        }

    }

    private void btnExitActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
        dispose();
    }

    /**
```

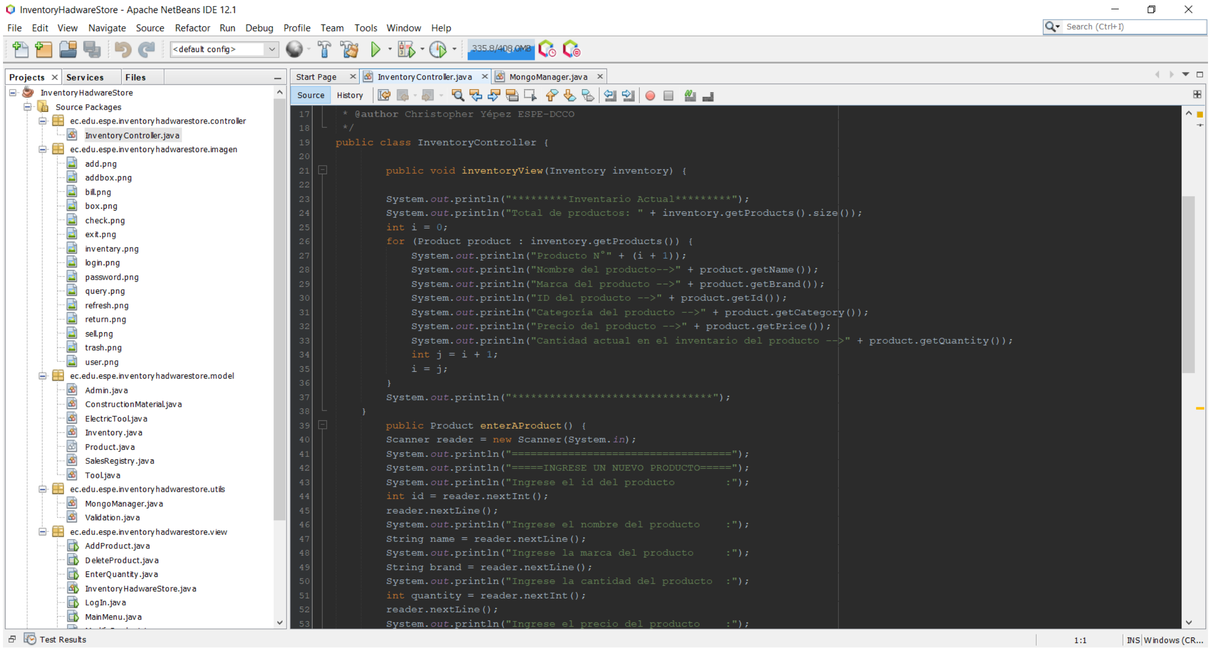
- ModifyProduct In this class you have programmed in the buttons do not work with methods


InventoryHadwareStore - Apache NetBeans IDE 12.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Projects Services Files
Start Page InventoryController.java MongoManager.java ModifyProduct.java
Source Design History
Test Results

```java
              boolean found = false;
              for (int j = 0; j < products.size(); j++) {
                  if (products.get(j).getName().equals(searchName)) {
                      found = true;
                      System.out.println("Que dato desea modificar?");
                      System.out.println("1:Marca");
                      System.out.println("2:Precio");
                      System.out.println("3:Categoria");
                      if (rbtnBrand.isSelected())
                              products.get(j).setBrand(txtChange.getText());
                      if (rbtnPrice.isSelected())
                              products.get(j).setPrice(Float.parseFloat(txtChange.getText()));
                      if (rbtnCategory.isSelected())
                              products.get(j).setCategory(txtChange.getText());
                      }
                      Gson gson = new Gson();
                      gson.toJson(products.get(j));
                      FileManager.writeFile("RegistroProductos.json", gson.toJson(products.get(j)));
                      System.out.println("Producto modificado");
                  }
              if (!found)
                  txtError.setText("No se encontro el Producto");

    }

    private void txtChangeActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void btnExitActionPerformed(java.awt.event.ActionEvent evt) {
        this.hide();
        MainMenu frm = new MainMenu();
        frm.setVisible(true);
    }

    /**
     * @param args the command line arguments
```

Controller Package

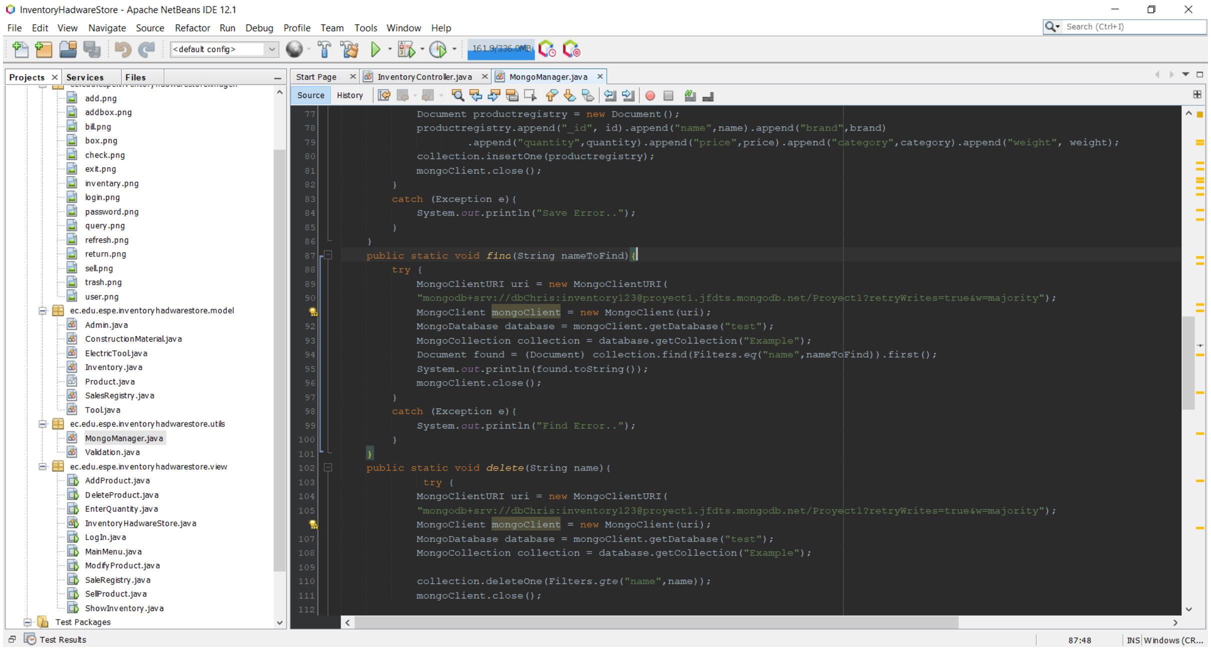
- In this class you have programmed menus, they should be called by methods.



```java
 * @author Christopher Yépez ESPE-DCCO
 */
public class InventoryController {

        public void inventoryView(Inventory inventory) {

        System.out.println("*********Inventario Actual*********");
        System.out.println("Total de productos: " + inventory.getProducts().size());
        int i = 0;
        for (Product product : inventory.getProducts()) {
            System.out.println("Producto N°" + (i + 1));
            System.out.println("Nombre del producto-->" + product.getName());
            System.out.println("Marca del producto -->" + product.getBrand());
            System.out.println("ID del producto -->" + product.getId());
            System.out.println("Categoría del producto -->" + product.getCategory());
            System.out.println("Precio del producto -->" + product.getPrice());
            System.out.println("Cantidad actual en el inventario del producto -->" + product.getQuantity());
            int j = i + 1;
            i = j;
        }
        System.out.println("*******************************");
    }
        public Product enterAProduct() {
        Scanner reader = new Scanner(System.in);
        System.out.println("==================================");
        System.out.println("=====INGRESE UN NUEVO PRODUCTO=====");
        System.out.println("Ingrese el id del producto        :");
        int id = reader.nextInt();
        reader.nextLine();
        System.out.println("Ingrese el nombre del producto    :");
        String name = reader.nextLine();
        System.out.println("Ingrese la marca del producto     :");
        String brand = reader.nextLine();
        System.out.println("Ingrese la cantidad del producto  :");
        int quantity = reader.nextInt();
        reader.nextLine();
        System.out.println("Ingrese el precio del producto    :");
```

Utils Package

- To create save search, in each method call back to mongo URI, creating excess and repeated code

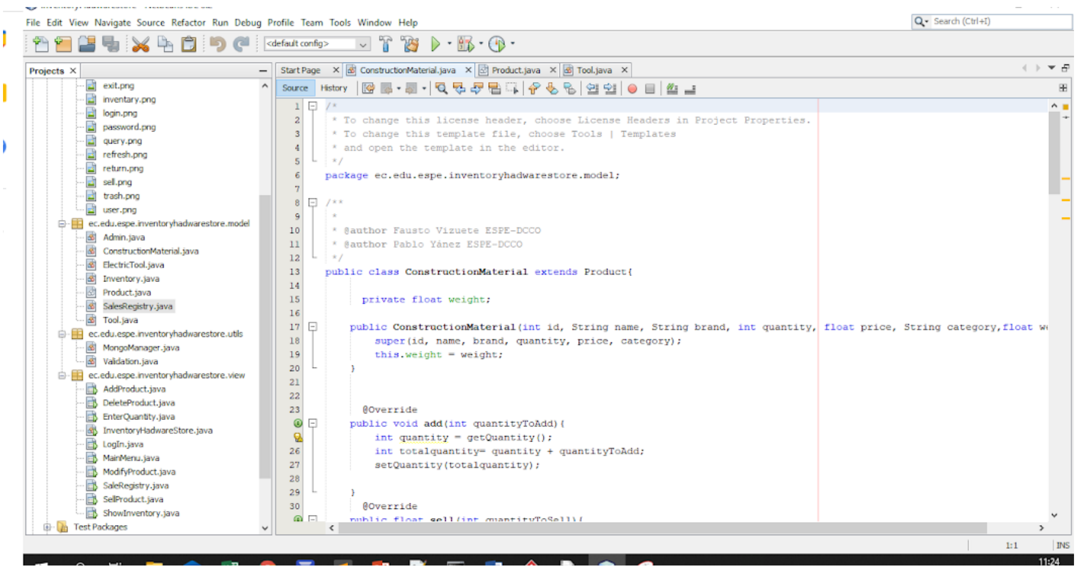


```java
            Document productregistry = new Document();
            productregistry.append("_id", id).append("name",name).append("brand",brand)
                    .append("quantity",quantity).append("price",price).append("category",category).append("weight", weight);
            collection.insertOne(productregistry);
            mongoClient.close();
        }
        catch (Exception e){
            System.out.println("Save Error..");
        }
    }
    public static void find(String nameToFind){
        try {
            MongoClientURI uri = new MongoClientURI(
            "mongodb+srv://dbChris:inventory123@proyect1.jfdts.mongodb.net/Proyect1?retryWrites=true&w=majority");
            MongoClient mongoClient = new MongoClient(uri);
            MongoDatabase database = mongoClient.getDatabase("test");
            MongoCollection collection = database.getCollection("Example");
            Document found = (Document) collection.find(Filters.eq("name",nameToFind)).first();
            System.out.println(found.toString());
            mongoClient.close();
        }
        catch (Exception e){
            System.out.println("Find Error..");
        }
    }
    public static void delete(String name){
             try {
            MongoClientURI uri = new MongoClientURI(
            "mongodb+srv://dbChris:inventory123@proyect1.jfdts.mongodb.net/Proyect1?retryWrites=true&w=majority");
            MongoClient mongoClient = new MongoClient(uri);
            MongoDatabase database = mongoClient.getDatabase("test");
            MongoCollection collection = database.getCollection("Example");

            collection.deleteOne(Filters.gte("name",name));
            mongoClient.close();

```

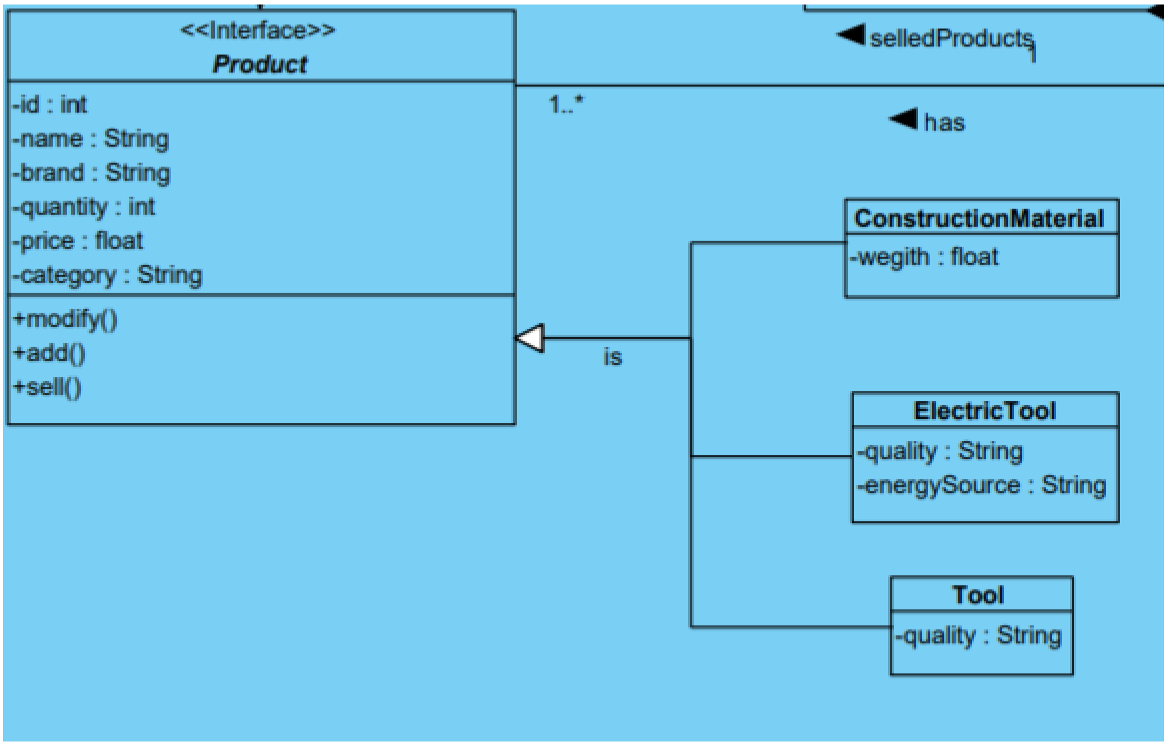
Open/Closed

Model Package

-

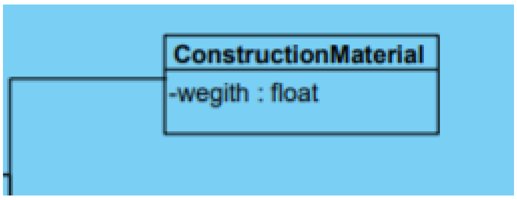


```java
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package ec.edu.espe.inventoryhadwarestore.model;

/**
 *
 * @author Fausto Vizuete ESPE-DCCO
 * @author Pablo Yánez ESPE-DCCO
 */
public class ConstructionMaterial extends Product{

      private float weight;

    public ConstructionMaterial(int id, String name, String brand, int quantity, float price, String category,float we
        super(id, name, brand, quantity, price, category);
        this.weight = weight;
    }


      @Override
    public void add(int quantityToAdd){
        int quantity = getQuantity();
        int totalquantity= quantity + quantityToAdd;
        setQuantity(totalquantity);

    }
      @Override
    public float sell(int quantityToSell){
```

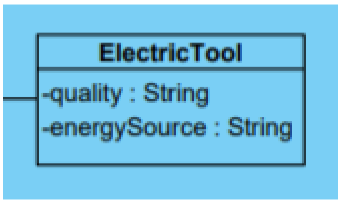


-
- encontramos que en las tres clases heredadas, no hay polimorfismo, por tanto de acuerdo al principio open closed, estos cambian ciertos aspectos y además añaden una función.

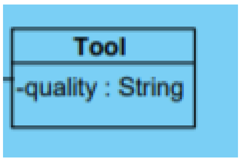
Principio de liskov de sustitución inversa.



1. no puede usar las mismas aplicaciones que la super clase padre.



2. Esta colinda con la utilización de otra clase que hacen algo parecido, además no puedo tener las mismas funciones que la superclase sin dañar la aplicación.



3. Esta es la clase que colinda en funciones con electric tool, ademas no hace lo que la super clase hace.

Por tanto estas tres co cumplen el principio liskov.