

Hw-24SOLIDPrinciplesFixed – Jeancarlo Santi

1. Single Responsibility Principle (SRP):

```
package ec.edu.espe.EDICOMPUCMS.model;

/**
 *
 * @author Sjean
 */
import java.time.Duration;
import java.time.Instant;

public class Computer {
    private int id;
    private boolean isActive;
    private Instant startTime;
    private Instant endTime;
    private Tariff tariff;
```

2. Single Responsibility Principle (SRP):

```
1 package ec.edu.espe.EDICOMPUCMS.model;
2 /**
3  *
4  * Paradigm Pioneers Squad, DCCO-ESPE
5  */
6
7 import ec.edu.espe.EDICOMPUCMS.controller.CustomerManager;
8 import ec.edu.espe.EDICOMPUCMS.model.Customer;
9 import java.util.Scanner;
10
11 public class CustomerMenu {
12     public static void customerMenu(){
13         CustomerManager customerManager = new CustomerManager();
14         Scanner scanner = new Scanner(System.in);
15         String option;
16
17         do {
18             System.out.println("1. Add Customer");
19             System.out.println("2. Remove Customer");
20             System.out.println("3. Show Customers");
21             System.out.println("4. Exit");
22             System.out.print("Select an option: ");
23             option = scanner.nextLine();
```

3. Open/Closed Principle (OCP):

```
import ec.edu.espe.EDICOMPUCMS.controller.CyberManager;
import javax.swing.*;
import java.awt.*;
import java.util.Timer;
import java.util.TimerTask;
import java.text.DecimalFormat;

public class CyberManagementPanel extends JPanel {

    private CyberManager cyberManager;
    private JPanel computerGrid;
    private JTextArea activityLog;
    private Timer timer;

    private static final Color BACKGROUND_COLOR = new Color(240, 240, 240);
    private static final Color ACCENT_COLOR = new Color(70, 130, 180);
    private static final Color BUTTON_START_COLOR = new Color(100, 180, 100);
    private static final Color BUTTON_STOP_COLOR = new Color(180, 100, 100);
    private static final Font TITLE_FONT = new Font("Arial", Font.BOLD, 24);
    private static final Font REGULAR_FONT = new Font("Arial", Font.PLAIN, 12);
```

4. Single Responsibility Principle (SRP):

```
package ec.edu.espe.EDICOMPUCMS.view;

import ec.edu.espe.EDICOMPUCMS.model.Users;
import java.awt.GridLayout;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JPasswordField;
import javax.swing.JTextField;

public class Login {

    private Users[] users;

    public Login(Users[] users) {
        this.users = users;
    }

    public boolean authenticate(String username, String password){
        for(Users user : users){
            if( user.getUsername().equals(username)&& user.getPassword().equals(password)){
                return true;
            }
        }
        return false;
    }
}
```

5. Liskov Substitution Principle

```
// Crear panel con fondo personalizado
JPanel panel = new JPanel(new GridBagLayout()) {
    @Override
    protected void paintComponent(Graphics g) {
        super.paintComponent(g);
        Imagen icon = new Imagen("C:\\Users\\Sjean\\Desktop\\Segundo Semestre Ing.Software\\POO\\Reposito
        Image img = icon.getImage();
        g.drawImage(img, 0, 0, getWidth(), getHeight(), this);
    }
};
panel.setOpaque(false);
GridBagConstraints gbc = new GridBagConstraints();
gbc.insets = new Insets(10, 10, 10, 10);
gbc.fill = GridBagConstraints.HORIZONTAL;

// Agregar icono de usuario
JLabel userIcon = new JLabel(new Imagen("C:\\Users\\Sjean\\Desktop\\Segundo Semestre Ing.Software\\POO\\F
gbc.gridx = 0;
gbc.gridy = 0;
gbc.gridwidth = 2;
panel.add(userIcon, gbc);
```

6.Liskov Substitution Principle

```
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
import java.awt.*;
import java.io.FileWriter;
import java.io.IOException;
import java.text.DecimalFormat;
import java.time.Duration;
import java.time.Instant;
import java.time.ZoneId;
import java.time.format.DateTimeFormatter;
import java.util.Calendar;
import java.util.Date;
import java.util.List;
import java.util.stream.Collectors;

public class PaymentsPanel extends JPanel {
    private CyberManager cyberManager;
    private JTable reportTable;
    private DefaultTableModel tableModel;
    private JComboBox<String> computerFilter;
    private JSpinner startDateSpinner, endDateSpinner;
    private JButton generateReportButton, exportCSVButton;
```