UNIVERSIDAD NACIONAL DE COLOMBIA – SEDE MEDELLÍN

Título

Entrega Actividad # 6 – Programación Orientada a Objetos

Estudiantes

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Grupo 3

Repositorio

https://github.com/esgomez1208/POO-2023-1-Actividad-6

Fecha de Entrega

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***Clase** Interfaz_CRUD.java*

```
package interfaz_crud;

public class Interfaz_CRUD {

    public static void main(String[] args) {
        Interfaz formulario = new Interfaz();
        formulario.setVisible(true);
    }

}
```

***Clase** Interfaz.java*

```
package interfaz_crud;

import java.io.File;
import java.io.IOException;
import java.io.RandomAccessFile;
import java.lang.NumberFormatException;

public class Interfaz extends javax.swing.JFrame {

    public Interfaz() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        btnCreate = new javax.swing.JButton();
        btnRead = new javax.swing.JButton();
        btnUpdate = new javax.swing.JButton();
        btnDelete = new javax.swing.JButton();
        txtNombre = new javax.swing.JTextField();
        txtNumero = new javax.swing.JTextField();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();


setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        btnCreate.setText("Create");
```

```
btnCreate.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnCreateActionPerformed(evt);
    }
});

btnRead.setText("Read");
btnRead.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnReadActionPerformed(evt);
    }
});

btnUpdate.setText("Update");
btnUpdate.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnUpdateActionPerformed(evt);
    }
});

btnDelete.setText("Delete");
btnDelete.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        btnDeleteActionPerformed(evt);
    }
});

jLabel1.setText("Nombre:");

jLabel2.setText("Numero:");
```

```
        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());

        getContentPane().setLayout(layout);

        layout.setHorizontalGroup(


layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(layout.createSequentialGroup()

                .addGap(31, 31, 31)

                .addComponent(btnCreate)

                .addGap(66, 66, 66)

                .addComponent(btnRead)


.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 67,
Short.MAX_VALUE)

                .addComponent(btnUpdate)

                .addGap(55, 55, 55)

                .addComponent(btnDelete)

                .addGap(32, 32, 32))

            .addGroup(layout.createSequentialGroup()


.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TR
AILING)

                    .addComponent(txtNumero,
javax.swing.GroupLayout.PREFERRED_SIZE, 215,
javax.swing.GroupLayout.PREFERRED_SIZE)


.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)

                        .addGroup(layout.createSequentialGroup()

                            .addGap(143, 143, 143)

                            .addComponent(txtNombre,
javax.swing.GroupLayout.PREFERRED_SIZE, 215,
javax.swing.GroupLayout.PREFERRED_SIZE))

                        .addGroup(layout.createSequentialGroup()

                            .addGap(90, 90, 90)


.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LE
ADING)
```

```
                                .addComponent(jLabel2,
javax.swing.GroupLayout.PREFERRED_SIZE, 65,
javax.swing.GroupLayout.PREFERRED_SIZE)

                                .addComponent(jLabel1,
javax.swing.GroupLayout.PREFERRED_SIZE, 74,
javax.swing.GroupLayout.PREFERRED_SIZE)))))

                .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))

        );

        layout.setVerticalGroup(


layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

            .addGroup(layout.createSequentialGroup()

                .addGap(56, 56, 56)

                .addComponent(jLabel1)


.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

                .addComponent(txtNombre,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addGap(59, 59, 59)

                .addComponent(jLabel2)


.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

                .addComponent(txtNumero,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)

                .addGap(74, 74, 74)


.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BA
SELINE)

                    .addComponent(btnCreate,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addComponent(btnRead,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
                    .addComponent(btnUpdate,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE)

                    .addComponent(btnDelete,
javax.swing.GroupLayout.PREFERRED_SIZE, 45,
javax.swing.GroupLayout.PREFERRED_SIZE))

                .addContainerGap(80, Short.MAX_VALUE))

        );


        pack();

    }// </editor-fold>


    private void btnCreateActionPerformed(java.awt.event.ActionEvent evt)
{

        try {

            String newName = String.valueOf(txtNombre.getText());


            long newNumber = Long.parseLong(txtNumero.getText());


            String nameNumberString;

            String name;

            long number;

            int index;


            File file = new File("D:\\Documents\\National University Of
Colombia\\Seventh Semester\\POO\\Actividades\\Actividad #6\\Amigos.txt");


            if (!file.exists()) {


                file.createNewFile();

            }


            // Opening file in reading and write mode.
```

```
RandomAccessFile raf
    = new RandomAccessFile(file, "rw");
boolean found = false;

// Checking whether the name
// of contact already exists.
// getFilePointer() give the current offset
// value from start of the file.
while (raf.getFilePointer() < raf.length()) {

    // reading line from the file.
    nameNumberString = raf.readLine();

    // splitting the string to get name and
    // number
    String[] lineSplit
        = nameNumberString.split("!");

    // separating name and number.
    name = lineSplit[0];
    number = Long.parseLong(lineSplit[1]);

    // if condition to find existence of record.
    if (name == newName || number == newNumber) {
        found = true;
        break;
    }
}

if (found == false) {
```

```
                nameNumberString = newName + "!" +
String.valueOf(newNumber);

                raf.writeBytes(nameNumberString);

                raf.writeBytes(System.lineSeparator());

                System.out.println(" Friend added. ");

                raf.close();
            }

            else {

                // Closing the resources.
                raf.close();

                // Print the message
                System.out.println(" Input name" + " does not exists. ");
            }
        }

        catch (IOException ioe) {

            System.out.println(ioe);
        }
        catch (NumberFormatException nef) {

            System.out.println(nef);
        }
    }
```

```
    private void btnReadActionPerformed(java.awt.event.ActionEvent evt) {
        try {

            String nameNumberString;
            String name;
            long number;
            int index;

            File file = new File("D:\\Documents\\National University Of
Colombia\\Seventh Semester\\POO\\Actividades\\Actividad #6\\Amigos.txt");

            if (!file.exists()) {

                file.createNewFile();
            }

            RandomAccessFile raf = new RandomAccessFile(file, "rw");
            boolean found = false;

            while (raf.getFilePointer() < raf.length()) {

                nameNumberString = raf.readLine();

                String[] lineSplit = nameNumberString.split("!");

                name = lineSplit[0];
                number = Long.parseLong(lineSplit[1]);

                System.out.println("Nombre Amigo: " + name + "\n" +
"Numero Contacto: " + number + "\n");
            }
        }
```

```
        catch (IOException ioe)
        {

            System.out.println(ioe);
        }
        catch (NumberFormatException nef)
        {

            System.out.println(nef);
        }
    }

    private void btnUpdateActionPerformed(java.awt.event.ActionEvent evt)
{
        try {

            String newName = String.valueOf(txtNombre.getText());

            long newNumber = Long.parseLong(txtNumero.getText());

            String nameNumberString;
            String name;
            long number;
            int index;

            File file = new File("D:\\Documents\\National University Of
Colombia\\Seventh Semester\\POO\\Actividades\\Actividad #6\\Amigos.txt");

            if (!file.exists()) {

                file.createNewFile();
            }
```

```
            RandomAccessFile raf = new RandomAccessFile(file, "rw");
            boolean found = false;

            while (raf.getFilePointer() < raf.length()) {

                nameNumberString = raf.readLine();

                String[] lineSplit = nameNumberString.split("!");

                name = lineSplit[0];
                number = Long.parseLong(lineSplit[1]);

                if (name.equals(newName) || number == newNumber) {
                    found = true;
                    break;
                }
            }

            if (found == true) {

                File tmpFile = new File("D:\\Documents\\National
University Of Colombia\\Seventh Semester\\POO\\Actividades\\Actividad
#6\\temp.txt");

                RandomAccessFile tmpraf = new RandomAccessFile(tmpFile,
"rw");

                raf.seek(0);

                while (raf.getFilePointer() < raf.length()) {

                    long currentPosition = raf.getFilePointer();
```

```
                    nameNumberString = raf.readLine();

                    index = nameNumberString.indexOf('!');
                    name = nameNumberString.substring(0, index);

                    if (name.equals(newName)) {

                        nameNumberString = name + "!" +
String.valueOf(newNumber);
                    }

                    tmpraf.writeBytes(nameNumberString);

                    tmpraf.writeBytes(System.lineSeparator());
                }

                raf.seek(0);
                tmpraf.seek(0);

                while (tmpraf.getFilePointer() < tmpraf.length()) {
                    raf.writeBytes(tmpraf.readLine());
                    raf.writeBytes(System.lineSeparator());
                }

                raf.setLength(tmpraf.length());

                tmpraf.close();
                raf.close();

                tmpFile.delete();

                System.out.println(" Friend updated. ");
```

```
            }

            else {

                raf.close();

                System.out.println(" Input name" + " does not exists. ");
            }
        }

        catch (IOException ioe) {
            System.out.println(ioe);
        }

        catch (NumberFormatException nef) {
            System.out.println(nef);
        }
    }

    private void btnDeleteActionPerformed(java.awt.event.ActionEvent evt)
{
        try {

            String newName = String.valueOf(txtNombre.getText());

            String nameNumberString;
            String name;
            long number;
            int index;

            File file = new File("D:\\Documents\\National University Of
Colombia\\Seventh Semester\\POO\\Actividades\\Actividad #6\\Amigos.txt");
```

```
            if (!file.exists()) {

                file.createNewFile();
            }

            RandomAccessFile raf = new RandomAccessFile(file, "rw");
            boolean found = false;

            while (raf.getFilePointer() < raf.length()) {

                nameNumberString = raf.readLine();

                String[] lineSplit = nameNumberString.split("!");

                name = lineSplit[0];
                number = Long.parseLong(lineSplit[1]);

                if (name.equals(newName)) {
                    found = true;
                    break;
                }
            }

            if (found == true) {

                File tmpFile = new File("D:\\Documents\\National
University Of Colombia\\Seventh Semester\\POO\\Actividades\\Actividad
#6\\temp.txt");

                RandomAccessFile tmpraf = new RandomAccessFile(tmpFile,
"rw");

                raf.seek(0);
```

```
while (raf.getFilePointer() < raf.length()) {

    nameNumberString = raf.readLine();

    index = nameNumberString.indexOf('!');
    name = nameNumberString.substring(0, index);

    if (name.equals(newName)) {

        raf.readLine();
        continue;
    }

    tmpraf.writeBytes(nameNumberString);

    tmpraf.writeBytes(System.lineSeparator());
}

raf.seek(0);
tmpraf.seek(0);

while (tmpraf.getFilePointer() < tmpraf.length()) {
    raf.writeBytes(tmpraf.readLine());
    raf.writeBytes(System.lineSeparator());
}

raf.setLength(tmpraf.length());

tmpraf.close();
raf.close();
```

```
                tmpFile.delete();

                System.out.println(" Friend deleted. ");
            }

            else {

                raf.close();

                System.out.println(" Input name" + " does not exists. ");
            }
        }

        catch (IOException ioe) {
            System.out.println(ioe);
        }
    }



    public static void main(String args[]) {
        /* Set the Nimbus look and feel */
        //<editor-fold defaultstate="collapsed" desc=" Look and feel
setting code (optional) ">
        /* If Nimbus (introduced in Java SE 6) is not available, stay
with the default look and feel.
         * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
         */
        try {
            for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
                if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());
```

```
                    break;
                }
            }
        } catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Interfaz.class.getName()).log(java.uti
l.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(Interfaz.class.getName()).log(java.uti
l.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(Interfaz.class.getName()).log(java.uti
l.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(Interfaz.class.getName()).log(java.uti
l.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new Interfaz().setVisible(true);
            }
        });
    }

    // Variables declaration - do not modify
    private javax.swing.JButton btnCreate;
    private javax.swing.JButton btnDelete;
    private javax.swing.JButton btnRead;
    private javax.swing.JButton btnUpdate;
```

```
    private javax.swing.JLabel jLabel1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JTextField txtNombre;
    private javax.swing.JTextField txtNumero;
    // End of variables declaration
}
```