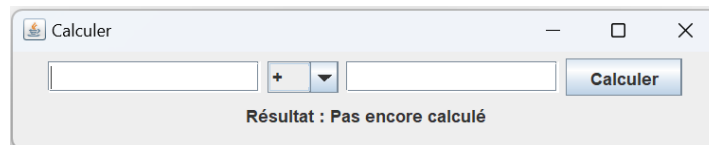


Série de TP N° 4 IHM en Java Swing	Licence Professionnelle Développement Informatique POO en Java
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### Objectif

Apprendre à créer de l'IHM avec java Swing.

### Exercice 1 :



```
package fsac.swing;
```

```
import java.awt.BorderLayout;
import java.awt.Dimension;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
```

```
import javax.swing.*;
```

```
public class SwingExercice1 extends JFrame {
```

```
    public SwingExercice1() {
```

```
        this.setTitle("Calculer");
        this.setSize(500, 200);
        this.setLocationRelativeTo(null);
        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
```

```
        JPanel contentPane = (JPanel)this.getContentPane();
        contentPane.setLayout(new BorderLayout());
```

```
        JTextField operand1TextField = new JTextField();
        operand1TextField.setPreferredSize(new Dimension(150, 22));
        JTextField operand2TextField = new JTextField();
        operand2TextField.setPreferredSize(new Dimension(150, 22));
        String options[] = {"+", "-", "x"};
        JComboBox<String> operateursComboBox = new
```

```
JComboBox<>(options);
        JButton calculerButton = new JButton("Calculer");
```

```
        JPanel northPanel = new JPanel();
        northPanel.add(operand1TextField);
```

```

northPanel.add(operateursComboBox);
northPanel.add(operand2TextField);
northPanel.add(calculerButton);
contentPane.add(northPanel, BorderLayout.NORTH);

JLabel resultLabel = new JLabel("Résultat : Pas encore
calculé!");
resultLabel.setHorizontalAlignment(JLabel.CENTER);
contentPane.add(resultLabel, BorderLayout.CENTER);

calculerButton.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        double a =
Double.parseDouble(operand1TextField.getText());
        double b =
Double.parseDouble(operand2TextField.getText());
        switch
(operateursComboBox.getSelectedItem().toString()) {
            case "+" : {
                resultLabel.setText("Résultat : " +
(a+b));
                break;
            }
            case "-" : {
                resultLabel.setText("Résultat : " + (a-
b));
                break;
            }
            case "x" : {
                resultLabel.setText("Résultat : " +
(a*b));
                break;
            }
        }
    }
});

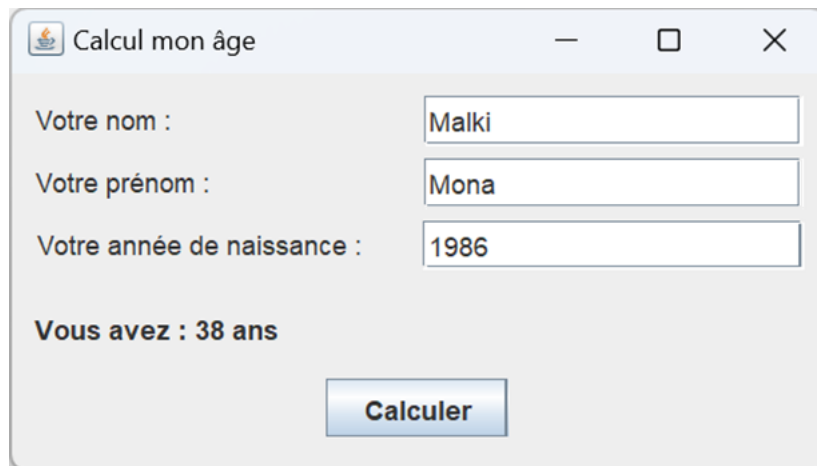
this.setVisible(true);

}

public static void main(String[] args) {
    new SwingExercice1();
}
}

```

## Exercice 2 :



```
import java.awt.BorderLayout;
import java.awt.GridLayout;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.Calendar;

import javax.swing.*;
import javax.swing.border.EmptyBorder;

public class SwingExercice2 extends JFrame {

    public SwingExercice2() {

        this.setTitle("Calculer mon âge");
        this.setSize(500, 200);
        this.setLocationRelativeTo(null);
        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);

        JPanel contentPane = (JPanel)this.getContentPane();
        contentPane.setLayout(new BorderLayout());

        JPanel northPanel = new JPanel();
        northPanel.setLayout(new GridLayout(3, 2, 10, 10));
        JTextField nomTextField = new JTextField();
        JTextField prenomTextField = new JTextField();
        JTextField dateTextField = new JTextField("aa");
        northPanel.add(new JLabel("Votre nom :"));
        northPanel.add(nomTextField);
        northPanel.add(new JLabel("Votre prénom :"));
        northPanel.add(prenomTextField);
        northPanel.add(new JLabel("Votre date Naissance :"));
        northPanel.add(dateTextField);

        JLabel resultLabel = new JLabel("Vous avez : ");
```

```

JPanel southPanel = new JPanel();
JButton calculerButton = new JButton("Calculer");
southPanel.add(calculerButton);
calculerButton.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        int annee = Integer.parseInt(dateTextField.getText());
        Calendar c = Calendar.getInstance();
        resultLabel.setText("Vous avez : "+ (c.get(Calendar.YEAR) - annee));
    }
});

contentPane.add(resultLabel, BorderLayout.CENTER);
contentPane.add(northPanel, BorderLayout.NORTH);
contentPane.add(southPanel, BorderLayout.SOUTH);

contentPane.setBorder(new EmptyBorder(10, 10, 10, 10));

this.setVisible(true);

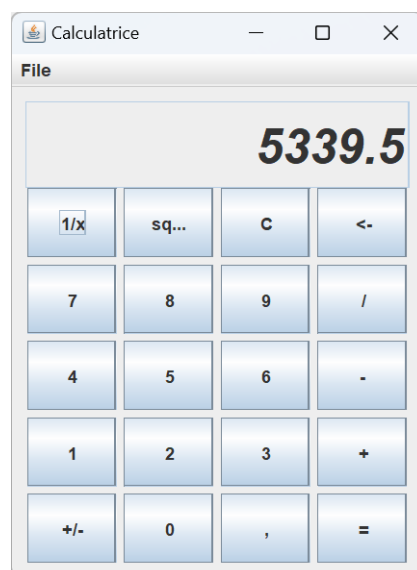
}

public static void main(String[] args) {
    new SwingExercice2();
}

}

```

### Exercice 3 :



```

import java.awt.*;
import java.util.Calendar;

import javax.swing.*;
import javax.swing.border.EmptyBorder;

public class SwingExercice3 extends JFrame {

    public SwingExercice3() {

        this.setTitle("Calculatrice");
        this.setSize(400, 200);
        this.setLocationRelativeTo(null);
        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);

        JPanel contentPane = (JPanel) this.getContentPane();
        contentPane.setLayout(new BorderLayout());

        JPanel northPanel = new JPanel();
        northPanel.setLayout(new BorderLayout());
        JTextField resultTextField = new JTextField();
        northPanel.add(resultTextField, BorderLayout.CENTER);
        resultTextField.setEditable(false);
        resultTextField.setHorizontalAlignment(JTextField.RIGHT);
        resultTextField.setPreferredSize(new Dimension(0, 30));

        JPanel centerPanel = new JPanel();
        centerPanel.setLayout(new GridLayout(5, 4, 5, 5));

        String buttons[] = { "1/x", "sqrt", "C", "<-", "7", "8", "9", "/", "4", "5", "6", "-", "1", "2",
"3", "+", "+/-", "0", ".", "=" };
        for (int i = 0; i < buttons.length; i++) {
            centerPanel.add(new JButton(buttons[i]));
        }

        contentPane.add(centerPanel, BorderLayout.CENTER);
        contentPane.add(northPanel, BorderLayout.NORTH);

        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

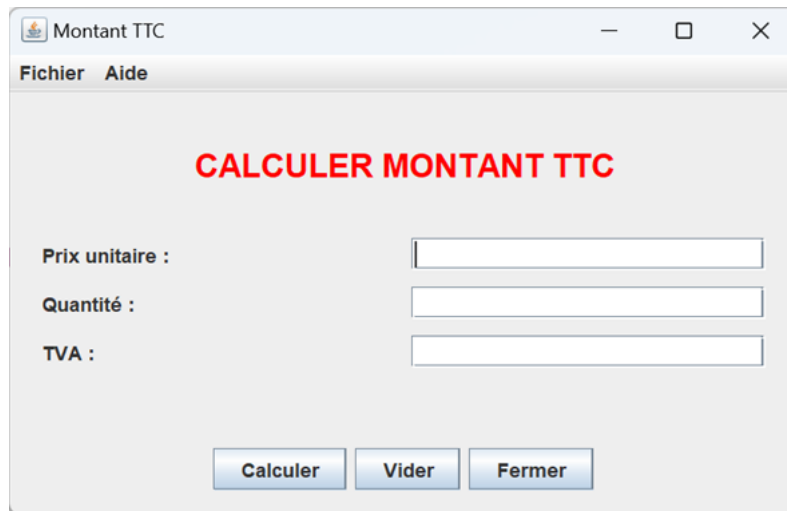
        this.setVisible(true);

    }

    public static void main(String[] args) {
        new SwingExercice3();
    }
}

```

#### Exercice 4:



```
import java.awt.*;
import javax.swing.* ;

public class SwingExercice4 extends JFrame{

    public SwingExercice4() {

        this.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
        this.setSize(500, 320);
        this.setLocationRelativeTo(null);
        this.setTitle("Montant TTC");

        JPanel contentPane = (JPanel) this.getContentPane();
        contentPane.setBorder(new EmptyBorder(10,10,10,10));

        JLabel titleLabel = new JLabel("CALCULER MONTANT TTC");

        contentPane.add(titleLabel, BorderLayout.NORTH);
        titleLabel.setHorizontalAlignment(JLabel.CENTER);
        titleLabel.setFont(new Font("Arial", Font.BOLD , 20));
        titleLabel.setForeground(Color.RED);
        titleLabel.setPreferredSize(new Dimension(0, 70));

        JMenuBar menuBar = new JMenuBar();
        JMenu fileMenu = new JMenu("Fichier");

        JMenuItem closeMenuItem = fileMenu.add("Fermer");
        closeMenuItem.addActionListener(new ActionListener() {

            @Override
```

```

        public void actionPerformed(ActionEvent e) {
            int rep = JOptionPane.showConfirmDialog(SwingExercice4.this, "Etes
vous sûr de fermer ?", "Confirmation" ,JOptionPane.YES_NO_OPTION);
            if(rep==JOptionPane.YES_OPTION) {
                SwingExercice4.this.dispose();
            }
        }
    });

```

```

JMenu helpMenu = new JMenu("Aide");
JMenuItem aboutMenuItem = helpMenu.add("A propos");
aboutMenuItem.addActionListener(new ActionListener() {

```

```

    @Override
    public void actionPerformed(ActionEvent e) {
        JDialog dialog = new JDialog(SwingExercice4.this, "A propos", true);
        dialog.setSize(new Dimension(300, 200));
        dialog.setLocationRelativeTo(SwingExercice4.this);
        JLabel label = new JLabel("<html>Cette application calcule :<br> le
montant TTC d'une marchandise!</html>");
        label.setHorizontalAlignment(JLabel.CENTER);
        dialog.add(label, BorderLayout.CENTER);
        dialog.setVisible(true);
    }
});

```

```

menuBar.add(fileMenu);
menuBar.add(helpMenu);

```

```

this.setJMenuBar(menuBar);

```

```

// Contenu au centre
JPanel centerPanel = new JPanel();
centerPanel.setLayout(new BorderLayout());
JPanel gridPanel = new JPanel();
gridPanel.setBorder(new EmptyBorder(10,10,10,10));
gridPanel.setLayout(new GridLayout(3, 2, 10, 10));
gridPanel.add(new JLabel("Prix unitaire : "));
JTextField prixTextField = new JTextField();
gridPanel.add(prixTextField);
gridPanel.add(new JLabel("Quantité : "));
JTextField quantiteTextField = new JTextField();
gridPanel.add(quantiteTextField);
gridPanel.add(new JLabel("TVA : "));
JTextField tvaTextField = new JTextField();
gridPanel.add(tvaTextField);
centerPanel.add(gridPanel, BorderLayout.NORTH);

```

```

JPanel southPanel = new JPanel();
JButton calculerButton = new JButton("Calculer");
calculerButton.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        double prix = Double.parseDouble(prixTextField.getText());
        double qte = Double.parseDouble(quantiteTextField.getText());
        double tva = Double.parseDouble(tvaTextField.getText());
        double montant = prix*qte*(1+tva);
        JOptionPane.showMessageDialog(SwingExercice4.this, "Le montant
est :"+montant+" DH", "Résultat", JOptionPane.INFORMATION_MESSAGE);
    }
});
JButton viderButton = new JButton("Vider");
viderButton.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        prixTextField.setText("");
        tvaTextField.setText("");
        quantiteTextField.setText("");
    }
});
JButton fermerButton = new JButton("Fermer");
fermerButton.addActionListener(new ActionListener() {

    @Override
    public void actionPerformed(ActionEvent e) {
        int rep = JOptionPane.showConfirmDialog(SwingExercice4.this, "Etes
vous sûr de fermer ?", "Confirmation",JOptionPane.YES_NO_OPTION);
        if(rep==JOptionPane.YES_OPTION) {
            SwingExercice4.this.dispose();
        }
    }
});

southPanel.add(calculerButton);
southPanel.add(viderButton);
southPanel.add(fermerButton);

contentPane.add(centerPanel, BorderLayout.CENTER);
contentPane.add(southPanel, BorderLayout.SOUTH);
this.setVisible(true);
}

public static void main(String[] args) {
    new SwingExercice4();
}

```



}

}