

TP1

# ARCHITECTURE D'UNE APPLICATION JAVAFX

**Application** : représente une application JavaFX

**Stage** : le conteneur de plus haut niveau de l'application

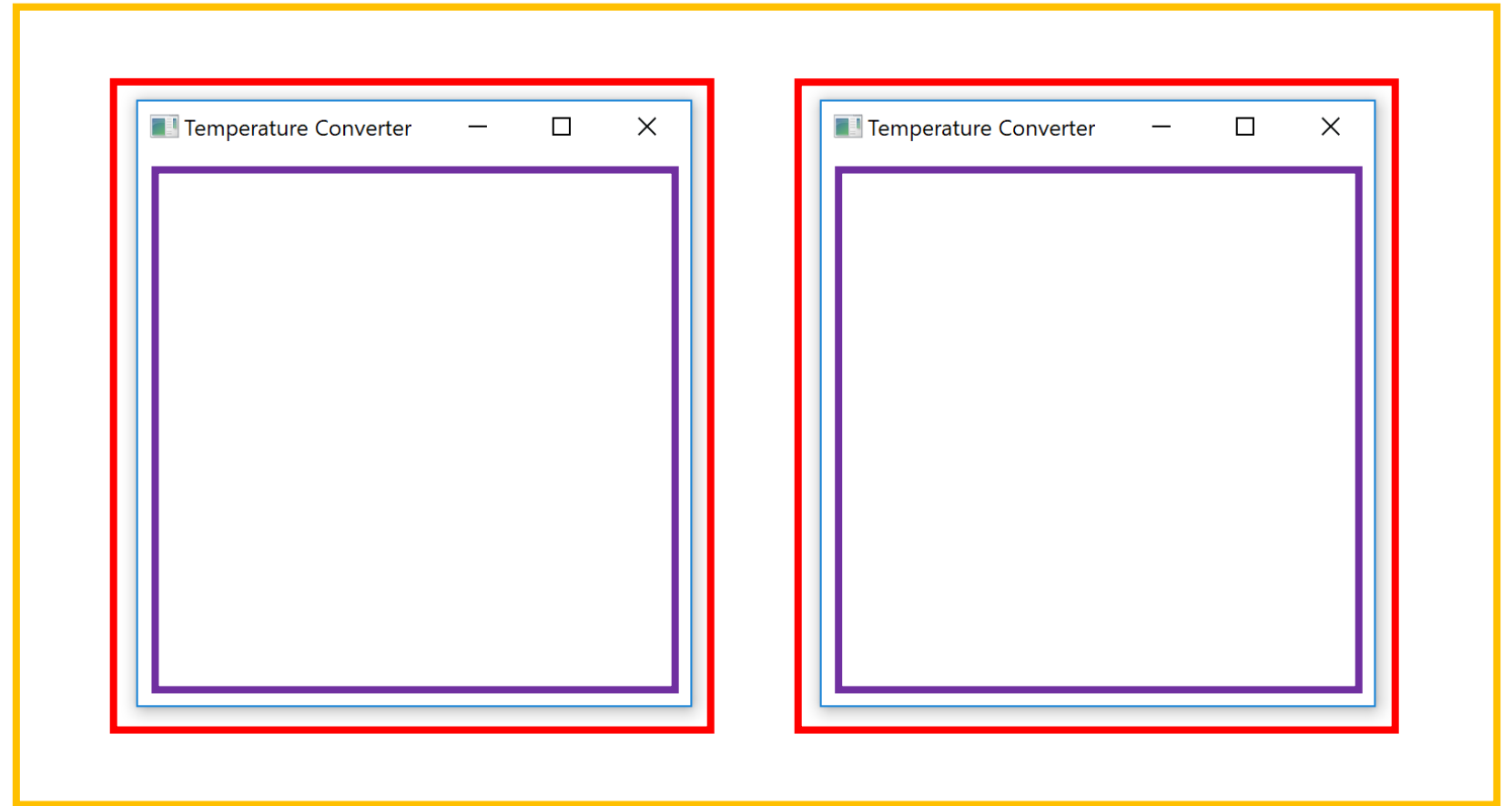
**Scene** : contient les composants visuels

# ARCHITECTURE D'UNE APPLICATION JAVAFX

Application

Stage

Scene

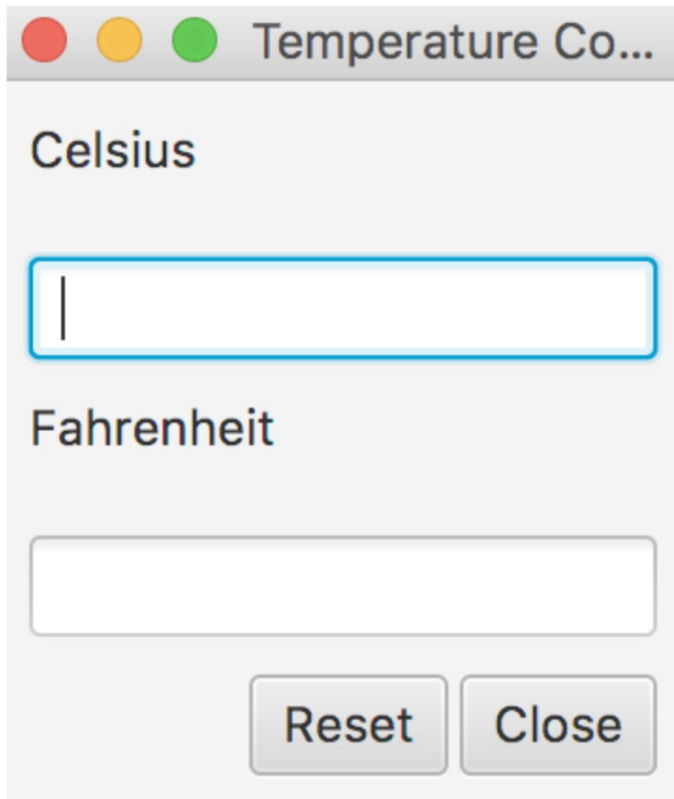


# BASE D'UNE APPLICATION JAVAFX

```
1 import javafx.application.Application;
2 import javafx.scene.Scene;
3 import javafx.scene.layout.Pane;
4 import javafx.stage.Stage;
5
6 public class MyClass extends Application
7 {
8     @Override
9     public void start(Stage stage) throws Exception
10    {
11        Pane root = new Pane(); //Create a panel
12        Scene scene = new Scene(root); //Put that panel in the scene
13        stage.setTitle("My Stage"); //Set the title of the stage
14        stage.setScene(scene); //Set the scene of the stage
15        stage.show(); //Show the stage
16    }
17
18    public static void main(String[] args)
19    {
20        Launch(args); //Launch the application
21    }
22 }
```

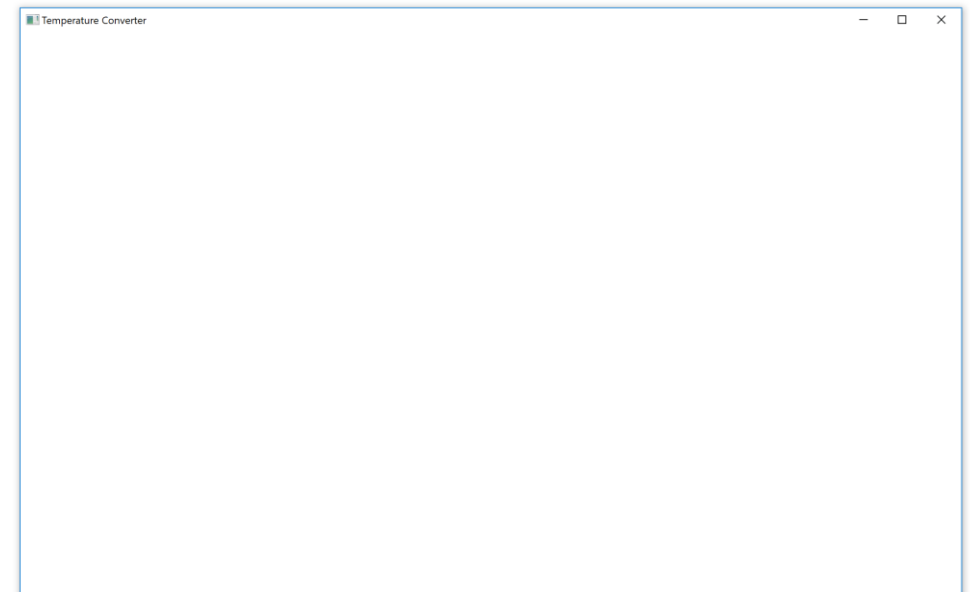
# CONSTRUIRE L'INTERFACE DU TP1

Ce qu'on veut :



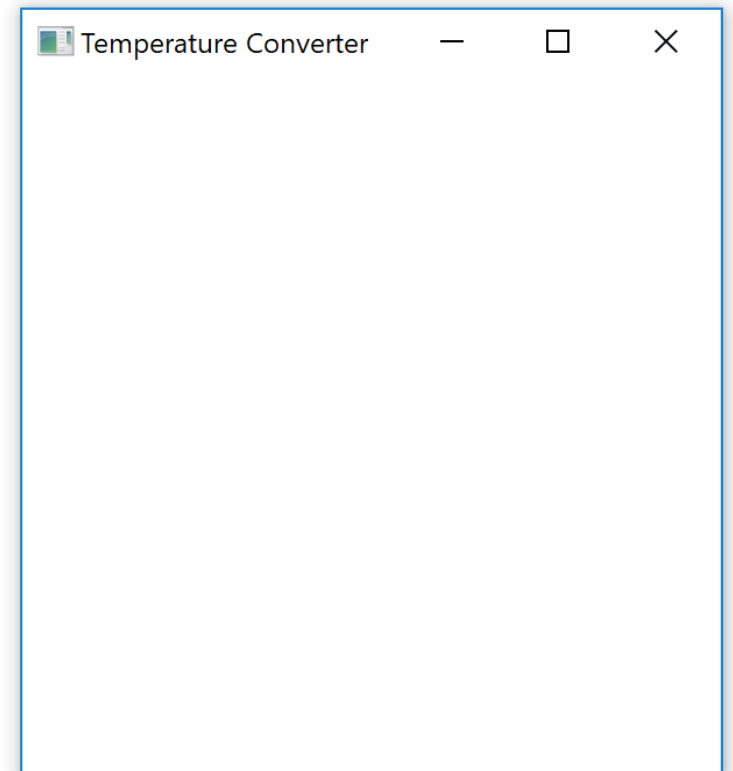
A mockup of a temperature converter window. The title bar is grey with three colored buttons (red, yellow, green) and the text "Temperature Co...". The main area is light grey. It contains the text "Celsius" above a text input field with a blue border and a vertical cursor. Below this is the text "Fahrenheit" above another empty text input field. At the bottom right are two buttons labeled "Reset" and "Close".

Ce qu'on a :



# CONSTRUIRE L'INTERFACE DU TP1

```
@Override
public void start(Stage stage) throws Exception
{
    GridPane root = new GridPane();
    Scene scene = new Scene(root);
    stage.setHeight(300);
    stage.setWidth(300);
    initListener();
    initGUI(root);
    stage.setTitle("Temperature Converter");
    stage.setScene(scene);
    stage.show();
}
```



# LES DIFFÉRENTS LAYOUTS



**Vbox**



**TilePane**



**GridPane**



**BorderPane**



**Hbox**



**FlowPane**



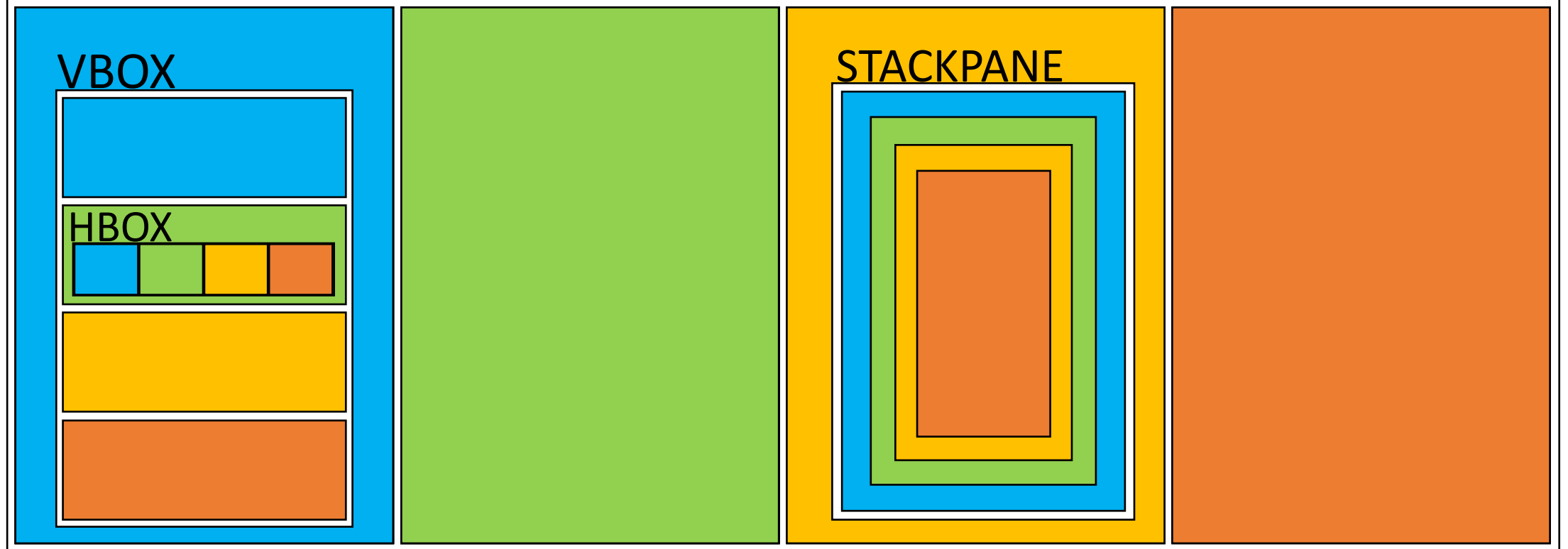
**StackPane**



**AnchorPane**

# COMBINAISON DE LAYOUTS

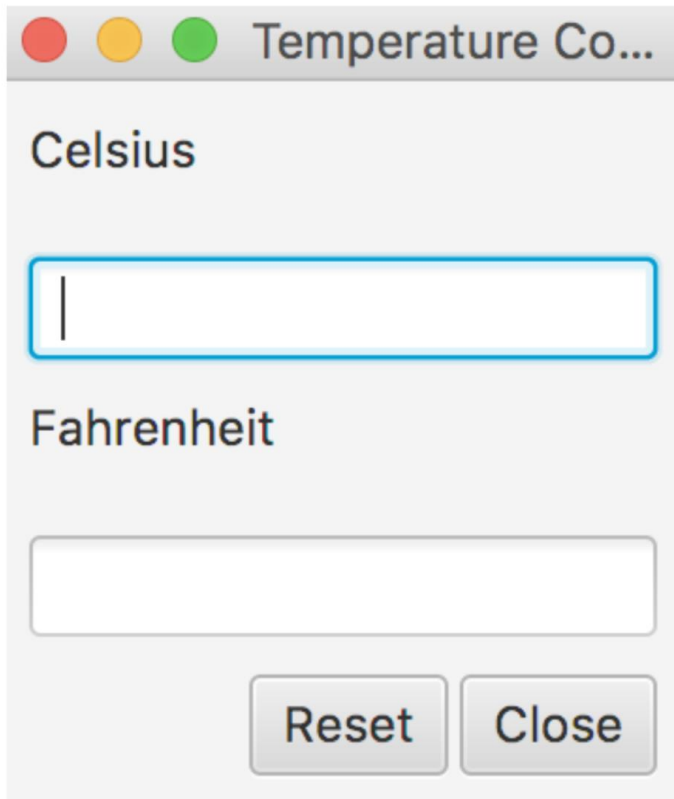
HBOX





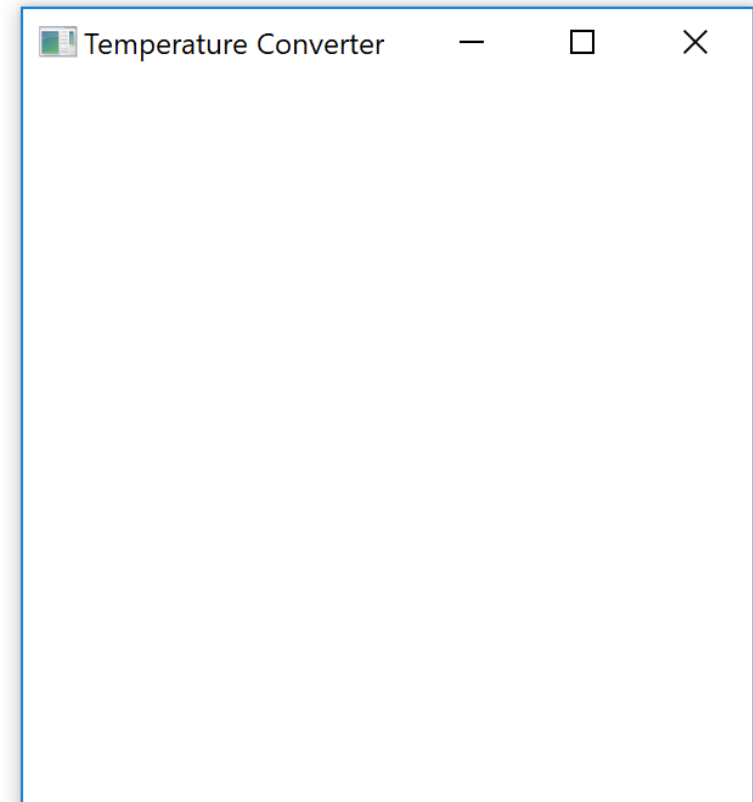
# CONSTRUIRE L'INTERFACE DU TP1

Ce qu'on veut :

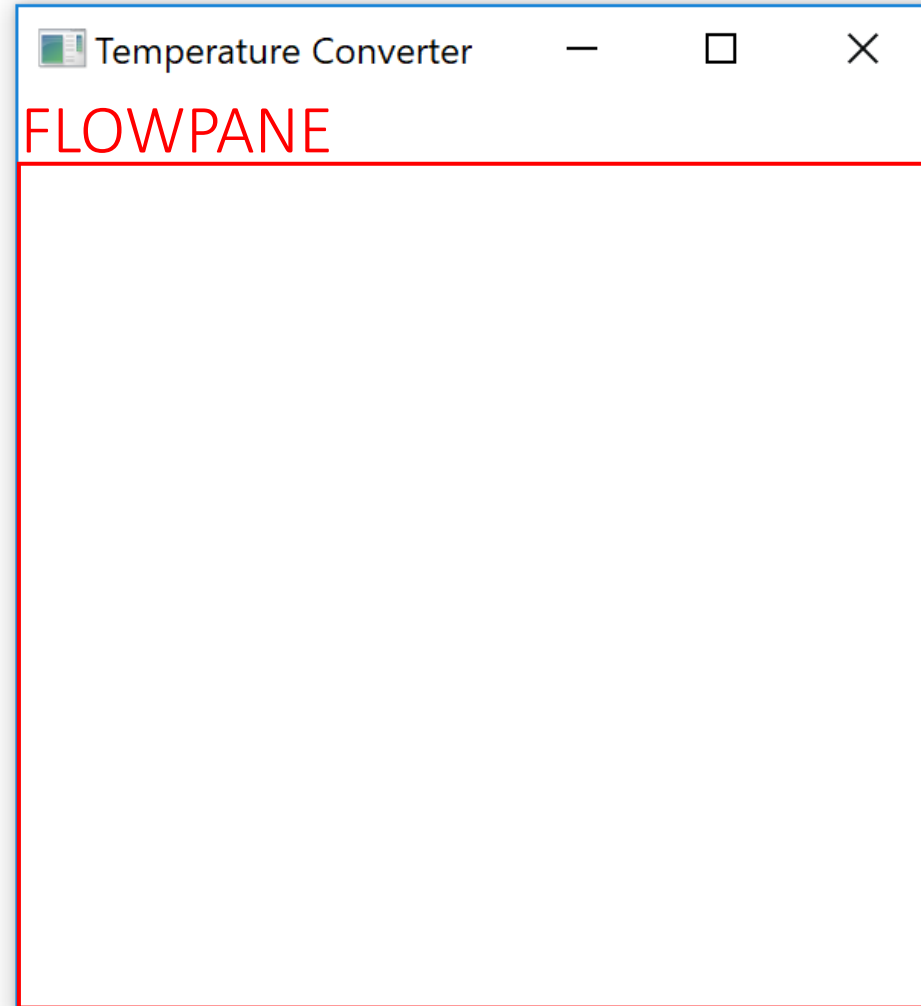


A mockup of the desired user interface for a temperature converter. It features a window titled "Temperature Co..." with standard macOS-style window controls (red, yellow, green buttons). The interface is divided into two sections: "Celsius" and "Fahrenheit". Under "Celsius", there is a text input field with a blue border and a vertical cursor. Under "Fahrenheit", there is an empty text input field. At the bottom right, there are two buttons labeled "Reset" and "Close".

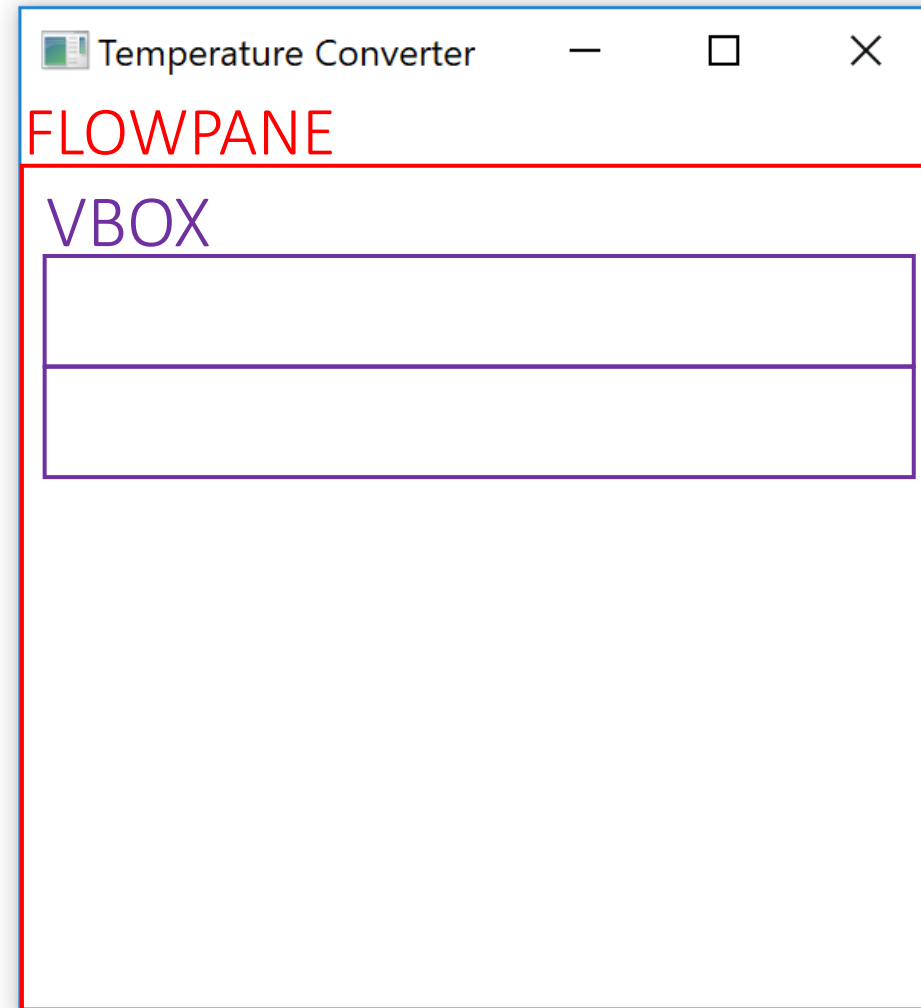
Ce qu'on a :



# CONSTRUIRE L'INTERFACE DU TP1



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# CONSTRUIRE L'INTERFACE DU TP1

Temperature Converter

FLOWPANE

VBOX

VBOX

# CONSTRUIRE L'INTERFACE DU TP1

Temperature Converter

FLOWPANE

VBOX

VBOX

HBOX

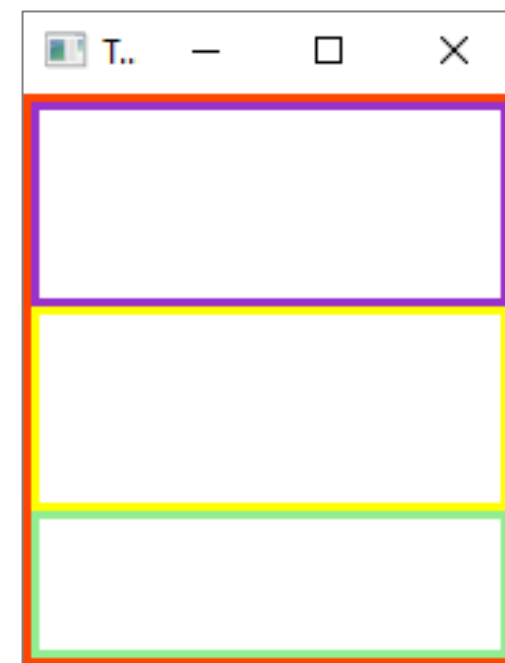
# CONSTRUIRE L'INTERFACE DU TP1

```
public void initGUI(Pane root)
{
    root.setStyle("-fx-border-color: orangered; -fx-border-width: 3px;");

    //On crée le Pane de la partie Celsius
    VBox paneC = new VBox();
    paneC.setPadding(new Insets(10, 10, 10, 10));
    paneC.setStyle("-fx-border-color: DARKORCHID; -fx-border-width: 3px;");
    paneC.setMinHeight(75);
    paneC.setMinWidth(175);
    root.getChildren().add(paneC);

    //On crée le Pane de la partie Fahrenheit
    VBox paneF = new VBox();
    paneF.setPadding(new Insets(10, 10, 10, 10));
    paneF.setStyle("-fx-border-color: yellow; -fx-border-width: 3px;");
    paneF.setMinHeight(75);
    paneF.setMinWidth(175);
    root.getChildren().add(paneF);

    //On crée le Pane des boutons
    HBox paneButtons = new HBox();
    paneButtons.setPadding(new Insets(10, 10, 10, 10));
    paneButtons.setSpacing(10);
    paneButtons.setStyle("-fx-border-color: lightgreen; -fx-border-width: 3px;");
    paneButtons.setMinHeight(54);
    paneButtons.setMinWidth(175);
    root.getChildren().add(paneButtons);
}
```



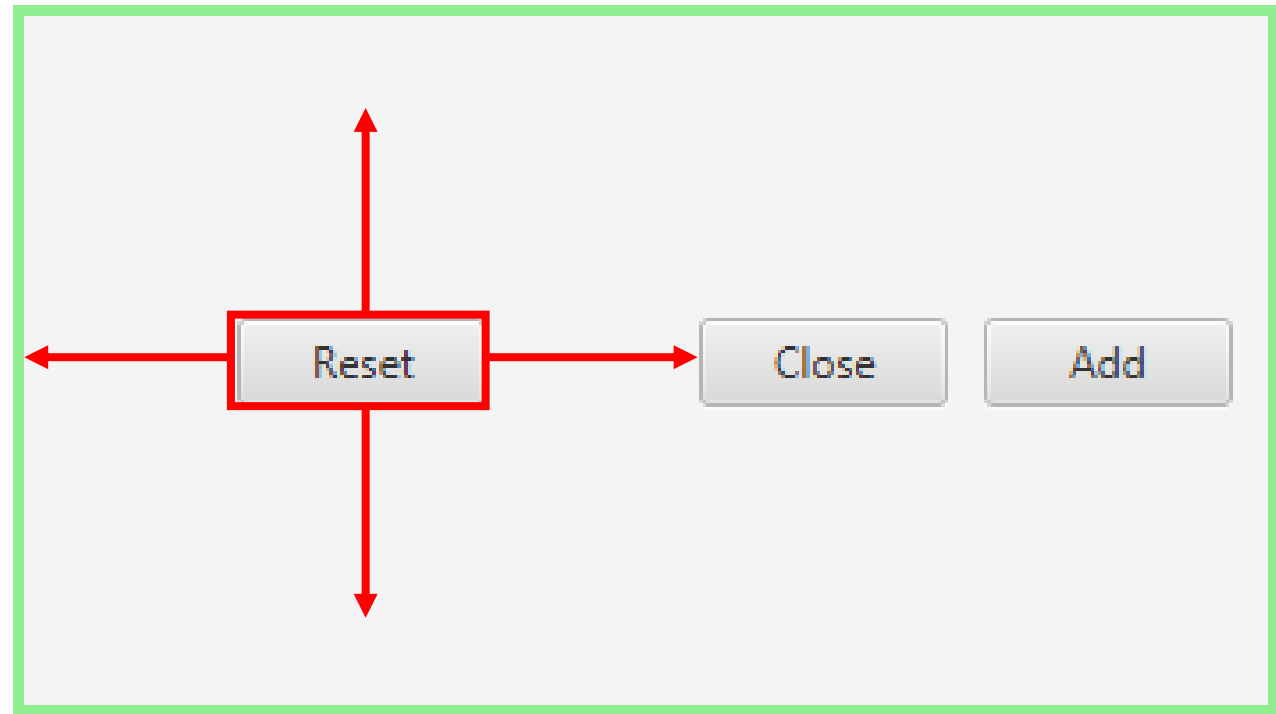
# CONSTRUIRE L'INTERFACE DU TP1

Margin

Padding

Spacing

Alignment



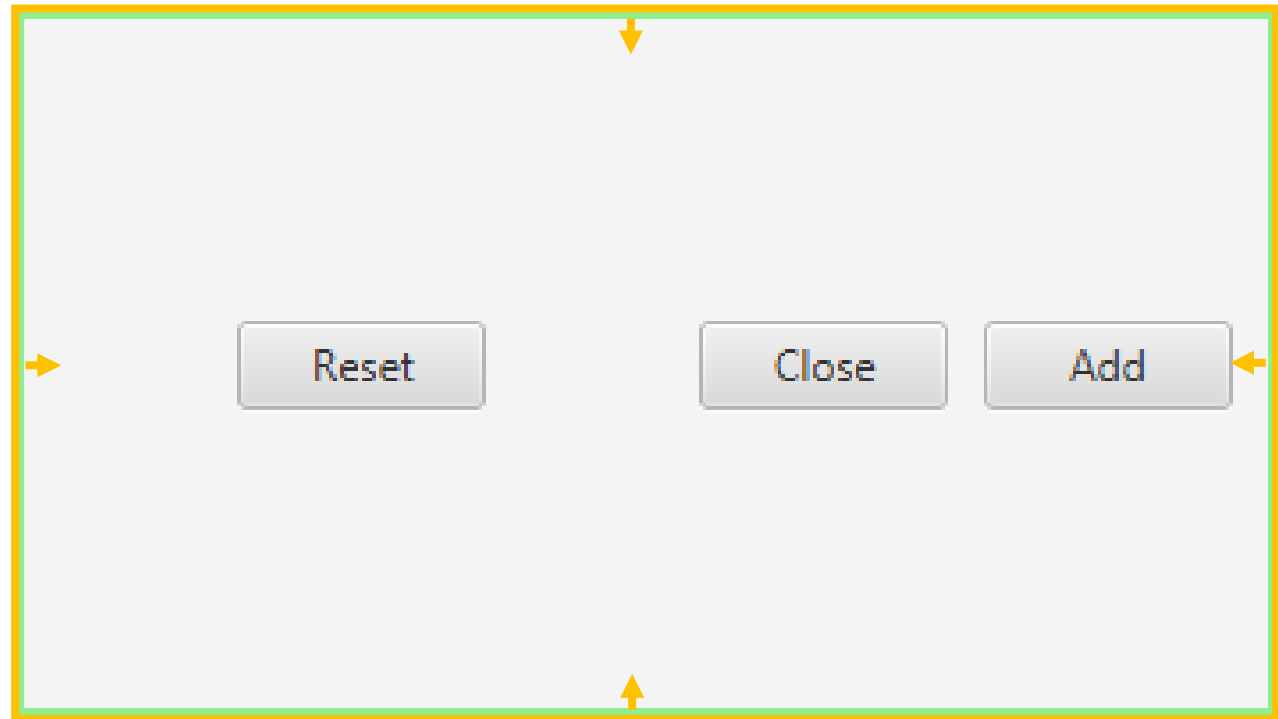
# CONSTRUIRE L'INTERFACE DU TP1

Margin

Padding

Spacing

Alignment





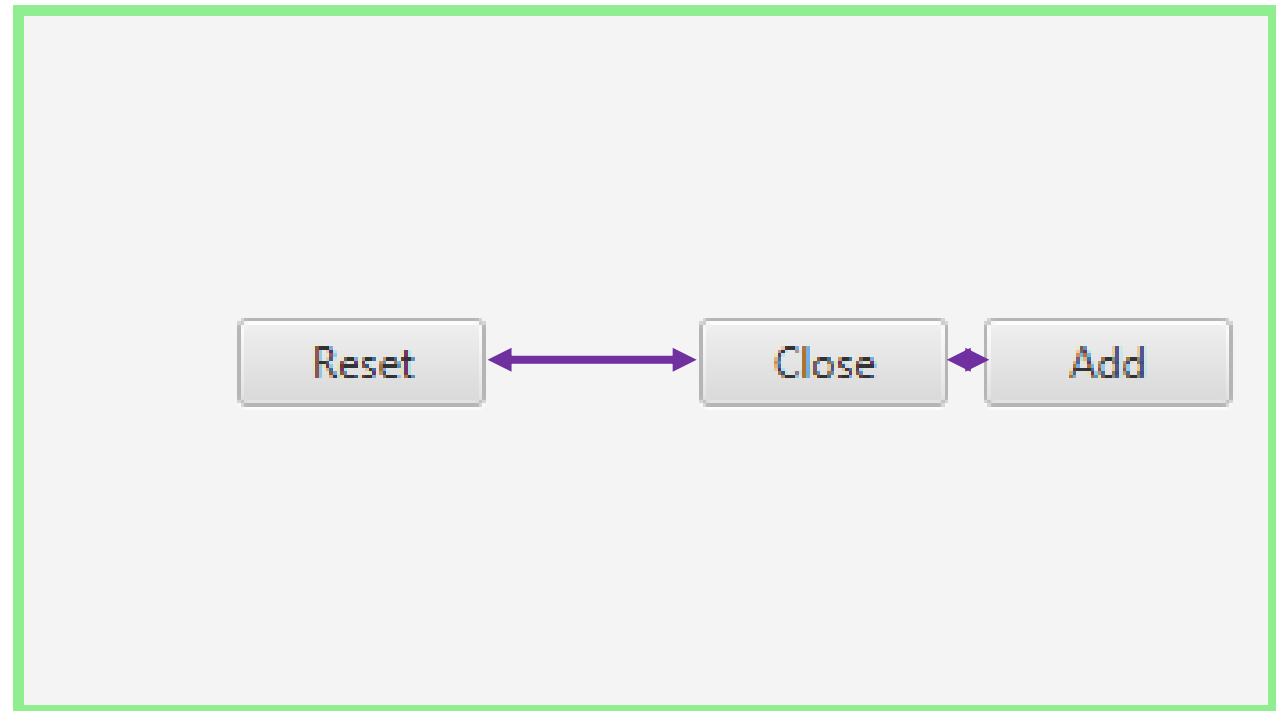
# CONSTRUIRE L'INTERFACE DU TP1

Margin

Padding

Spacing

Alignment



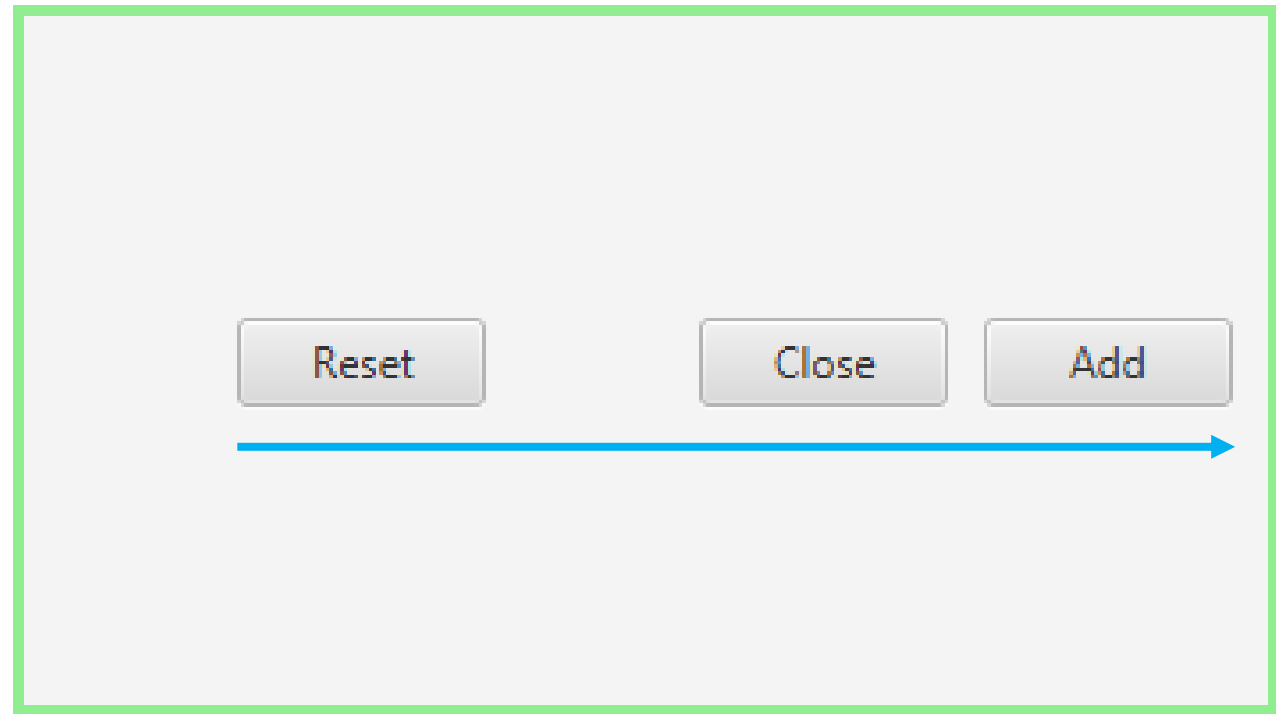
# CONSTRUIRE L'INTERFACE DU TP1

Margin

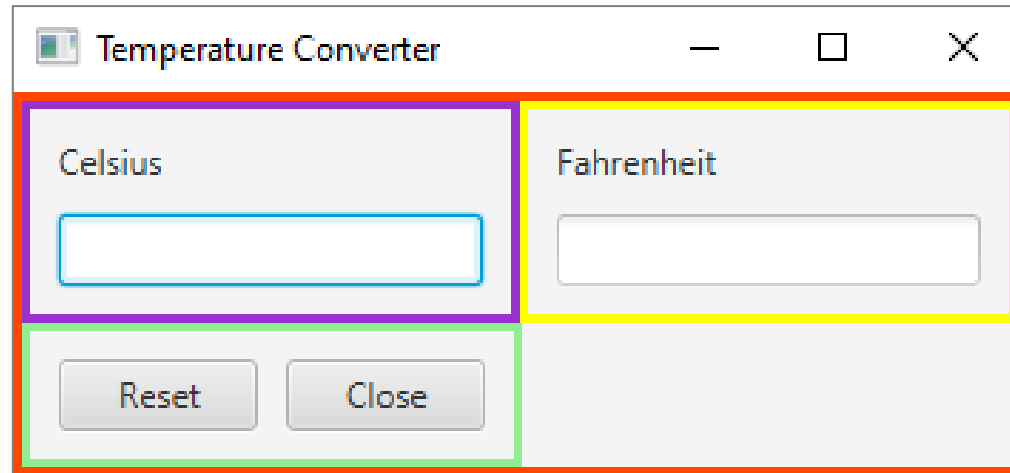
Padding

Spacing

Alignment



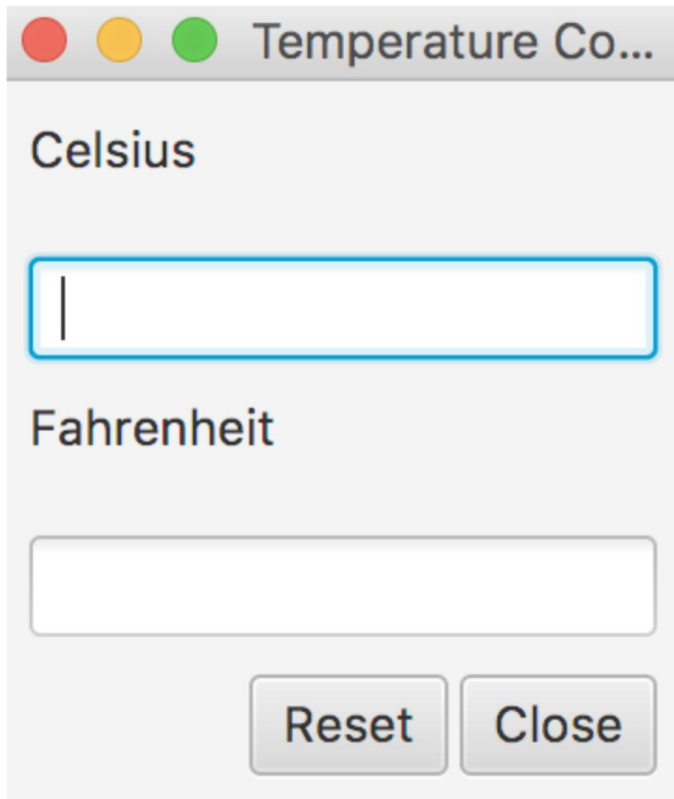
# CONSTRUIRE L'INTERFACE DU TP1



```
//On crée le Pane des boutons
HBox paneButtons = new HBox();
paneButtons.setPadding(new Insets(10, 10, 10, 10));
paneButtons.setSpacing(10);
paneButtons.setStyle("-fx-border-color: lightgreen; -fx-border-width: 3px;");
paneButtons.setAlignment(Pos.CENTER_RIGHT);
root.getChildren().add(paneButtons);
```

# CONSTRUIRE L'INTERFACE DU TP1

Ce qu'on veut :



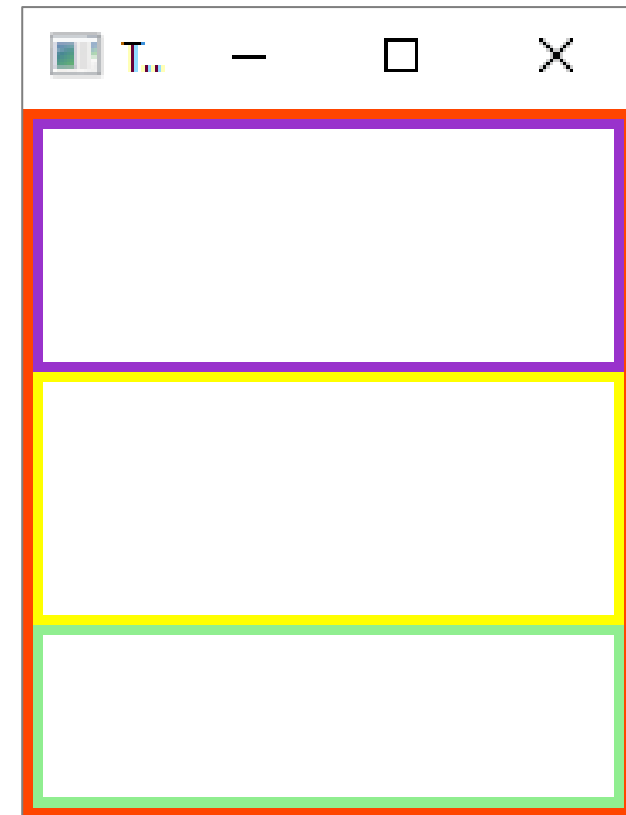
Temperature Co...

Celsius

Fahrenheit

Reset Close

Ce qu'on a :



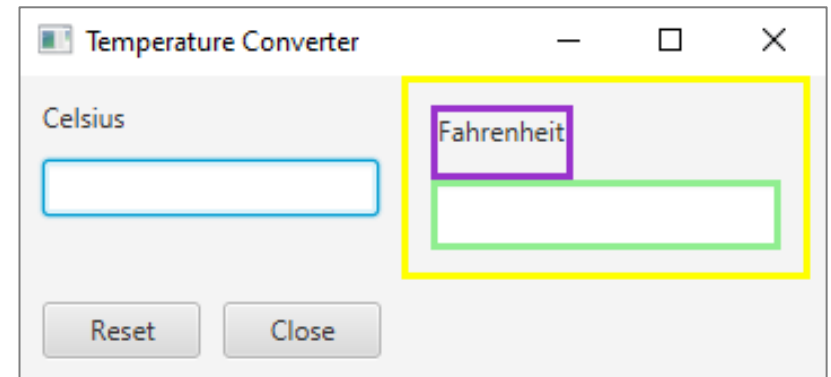
T...

# CONSTRUIRE L'INTERFACE DU TP1

```
//On crée le Pane de la partie Fahrenheit
VBox paneF = new VBox();
paneF.setPadding(new Insets(10, 10, 10, 10));
paneF.setStyle("-fx-border-color: yellow; -fx-border-width: 3px;");
root.getChildren().add(paneF);
```

```
//On crée le label de la partie Fahrenheit
labelF = new Label("Fahrenheit");
labelF.setPadding(new Insets(0, 0, 10, 0));
labelF.setStyle("-fx-border-color: DARKORCHID; -fx-border-width: 3px;");
paneF.getChildren().add(labelF);
```

```
//On crée le TextField de la partie Fahrenheit
textFieldF = new TextField("");
textFieldF.setStyle("-fx-border-color: lightgreen; -fx-border-width: 3px;");
paneF.getChildren().add(textFieldF);
textFieldF.setOnKeyPressed(textFieldFListener);
textFieldF.setTextFormatter(textFormatterF);
```



# CONSTRUIRE L'INTERFACE DU TP1

Événements fournis par l'API de JavaFX :

**ActionEvent** pour une action simple sur l'interface (clic sur un bouton par exemple)

**MouseEvent** pour les déplacements, survols et clics de la souris

**ScrollEvent** pour les défilements à l'aide de la molette de la souris, du trackpad, d'un écran tactile, ...

**TouchEvent** pour les appuis sur un écran tactile

Etc.

# Démonstration