

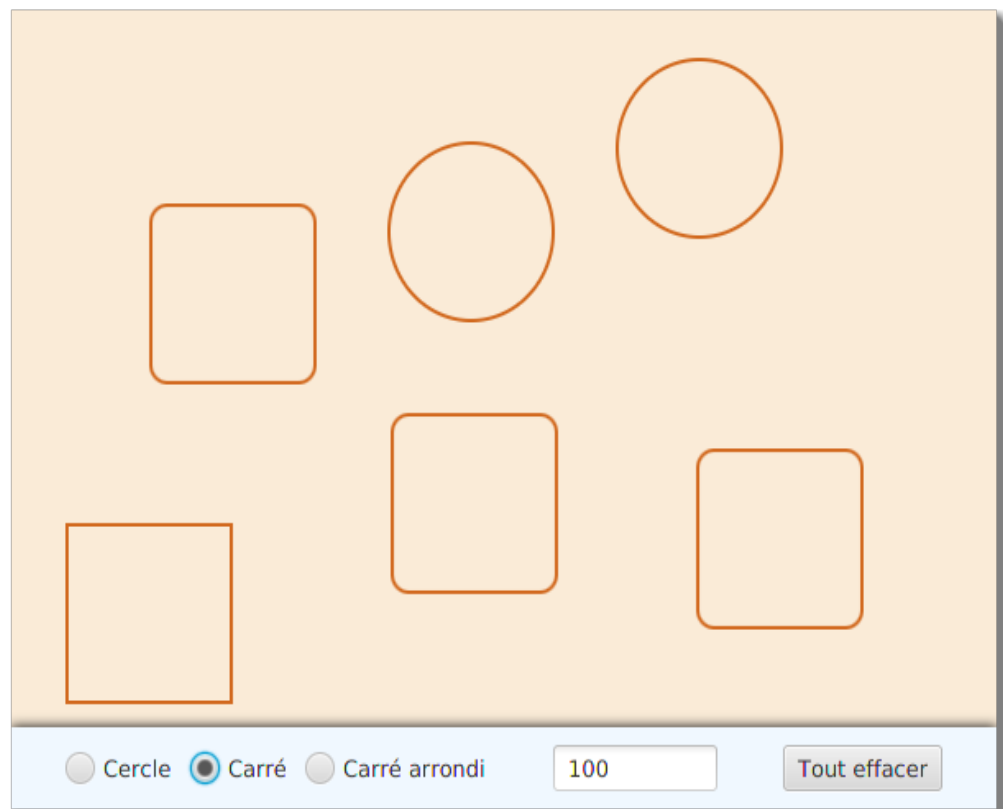
**/home/manu/CloudStation/ProjetsJAVA/FormesFXML/src/fx/FormesFXML.java**

```
/*
 * 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 fx;

import javafx.application.Application;
import javafx.fxml.FXMLLoader;
import javafx.scene.*;
import javafx.stage.Stage;

/**
 *
 * @author manu
 */
public class FormesFXML extends Application {

    @Override
    public void start(Stage fenêtre) throws Exception {
        Parent root = FXMLLoader.load(getClass().getResource("Formes.fxml"));
        Scene scene = new Scene(root);
        fenêtre.setTitle("Placement de formes");
        fenêtre.setScene(scene);
        fenêtre.show();
    }
}
```



```
<?xml version="1.0" encoding="UTF-8"?>

/home/manu/CloudStation/Projets/JAVA/FormesFXML/src/fx/Formes.fxml

<?import fx.*?>
<?import javafx.scene.text.*?>
<?import javafx.scene.effect.*?>
<?import javafx.geometry.*?>
<?import java.lang.*?>
<?import java.util.*?>
<?import javafx.scene.*?>
<?import javafx.scene.control.*?>
<?import javafx.scene.layout.*?>

<BorderPane prefHeight="450" prefWidth="600.0" style="-fx-background-color: #FAEBD7;" xmlns="http://javafx.com/javafx/8" xmlns:fx="http://javafx.com/fxml/1" fx:controller="Fx.For
<center>
<Panneau fx:id="panneau" BorderPane.alignment="CENTER" />
</center>
<bottom>
<FlowPane alignment="CENTER" hgap="10.0" style="-fx-background-color: #F0F8FF;" BorderPane.alignment="CENTER">
<padding>
<Insets bottom="10.0" top="10.0" />
</padding>
<Effect>
<DropShadow />
</effect>
<children>
<RadioButton mnemonicParsing="false" onAction="#formeCirculaire" selected="true" text="Cercle">
<toggleGroup fx:id="formes" />
</toggleGroup>
</RadioButton>
</toggleGroup>
<RadioButton mnemonicParsing="false" onAction="#formeCarree" text="Carre" toggleGroup="formes" />
<RadioButton mnemonicParsing="false" onAction="#formeArroundi" text="Carre arrondi" toggleGroup="formes" />
<TextField fx:id="largeur" onAction="#changerLargeur" prefHeight="25.0" prefWidth="100.0" promptText="Largeur" text="100">
<FlowPane.margin>
<Insets left="30.0" />
</FlowPane.margin>
</TextField>
</FlowPane.margin>
<Button mnemonicParsing="false" onAction="#toutEffacer" text="Tout effacer">
<FlowPane.margin>
<Insets left="30.0" />
</FlowPane.margin>
</Button>
</children>
</FlowPane>
</bottom>
</BorderPane>
```

```
/home/manu/CloudStation/ProjetsJAVA/FormesFXML/src/fx/FormesController.java
```

```
package fx;

import java.net.URL;
import java.util.ResourceBundle;
import javafx.event.ActionEvent;
import javafx.fxml.*;
import javafx.scene.control.TextField;

public class FormesController implements Initializable {

    @FXML
    private Panneau panneau;

    @FXML
    private TextField largeur;

    @FXML
    private void formeCirculaire(ActionEvent event) {
        panneau.changer(TypeForme.CERCLE);
    }

    @FXML
    private void formeCarrée(ActionEvent event) {
        panneau.changer(TypeForme.CARRÉ);
    }

    @FXML
    private void formeCarréeArrondi(ActionEvent event) {
        panneau.changer(TypeForme.CARRÉARRONDI);
    }

    @FXML
    private void changerLargeur(ActionEvent event) {
        panneau.changer(Double.parseDouble(largeur.getText()));
    }

    @FXML
    private void toutEffacer(ActionEvent event) {
        panneau.toutEffacer();
    }

    @Override
    public void initialize(URL url, ResourceBundle rb) { }
}
```

```
/home/manu/CloudStation/ProjetsJAVA/FormesFXMLHiérarchie/src/fx/Panneau.java
```

```
package fx;

import java.util.*;
import javafx.scene.canvas.*;
import javafx.scene.layout.Pane;

enum TypeForme {CERCLE, CARRÉ, CARRÉARRONDI};

public class Panneau extends Pane {
    private TypeForme type = TypeForme.CERCLE;
    private double largeur = 100;
    private GraphicsContext calque;
    private List<Forme> formes = new ArrayList<>();

    public Panneau() {
        Canvas dessin = new Canvas(1920, 1024);
        calque = dessin.getGraphicsContext2D();
        Forme.setCalque(calque);
        setOnMouseClicked(evt -> { tracerForme(evt.getX(), evt.getY()); });
        getChildren().add(dessin);
    }

    public void changer(TypeForme forme) { type = forme; }

    public void toutEffacer() {
        calque.clearRect(0, 0, getWidth(), getHeight());
        formes.clear();
    }

    public void changer(double largeur) {
        this.largeur = largeur;
        calque.clearRect(0, 0, getWidth(), getHeight());
        for (Forme forme : formes) forme.changeLargeur(largeur);
    }

    private void tracerForme(double x, double y) {
        Forme forme = null;
        switch (type) {
            case CERCLE : forme = new Cercle(x, y, largeur/2); break;
            case CARRÉ : forme = new Carré(x, y, largeur); break;
            case CARRÉARRONDI : forme = new CarréArrondi(x, y, largeur); break;
        }
        formes.add(forme);
        forme.affiche();
    }
}
```

```
/home/manu/CloudStation/ProjetsJAVA/FormesFXMLHiérarchie/src/fx/Forme.java
```

```
package fx;

import javafx.scene.canvas.GraphicsContext;
import javafx.scene.paint.Color;

abstract class Forme {
    protected double x, y;
    protected static GraphicsContext calque;

    public Forme(double x, double y) {
        this.x = x;
        this.y = y;
        calque.setStroke(Color.CHOCOLATE);
        calque.setLineWidth(2);
    }

    public abstract void affiche();
    public abstract void changeLargeur(double valeur);
    public static void setCalque(GraphicsContext contexte) { calque = contexte; }
}

class Cercle extends Forme {
    private double rayon;

    public Cercle(double x, double y, double rayon) {
        super(x, y);
        this.rayon = rayon;
    }

    @Override
    public void affiche() {
        calque.strokeOval(x-rayon, y-rayon, 2*rayon, 2*rayon);
    }

    @Override
    public void changeLargeur(double valeur) {
        rayon = valeur/2;
        affiche();
    }
}

class Carré extends Forme {
    protected double côté;

    public Carré(double x, double y, double côté) {
        super(x, y);
        this.côté = côté;
    }

    @Override
    public void affiche() {
        calque.strokeRect(x-côté/2, y-côté/2, côté, côté);
    }

    @Override
    public void changeLargeur(double valeur) {

```

```

    côté = valeur;
    affiche();
}
}

class CarréArrondi extends Carré {
    public CarréArrondi(double x, double y, double côté) {
        super(x, y, côté);
    }

    @Override
    public void affiche() {
        calque.strokeRoundRect(x-côté/2, y-côté/2, côté, côté, 20, 20);
    }
}

```

