The **TicTacToe** Class

**NOTE:** This class is similar to the **ShowGridPane** class that was discussed in Chapter 14. The **TicTacToe** class displays a 3x3 grid that can be filled with Xs and Os

Create the **TicTacToe** class by extending the **Application** class as follows:

- Override `start(Stage)`
- Use the **GridPane** class to create the grid
- Use the X and O classes to paint Xs and Os on that grid as shown in the picture
- Place the **GridPane** object in a **Scene** object
- Place the **Scene** object on the **Stage** object
- Show **Stage** object

1. Create the UML class diagram showing **TicTacToe**, **Pane**, X, and O and their relationships.
2. Create the **TicTacToe** class. It should display the Xs and Os as shown in the picture.
public class TicTacToe extends Application {
    // code for this class
}

class O extends Pane {
    public O() {
        setPrefSize(200,200); // preferred size of the pane
        // add black border to the pane
        Circle circle = new Circle();
        circle.centerXProperty().bind(widthProperty().divide(2));
        circle.centerYProperty().bind(heightProperty().divide(2));
        circle.radiusProperty().bind((heightProperty().add(widthProperty())).divide(6));
        circle.setStyle("-fx-stroke: blue; -fx-fill: white; -fx-stroke-width: 10px;");
        getChildren().add(circle);
    }
}

class X extends Pane {
    public X() {
        setPrefSize(200,200); // preferred size of the pane
        // add black border to the pane
        Line line1 = new Line(40, 40, 40, 40);
        line1.endXProperty().bind(widthProperty().subtract(40));
        line1.endYProperty().bind(heightProperty().subtract(40));
        line1.setStyle("-fx-stroke: red; -fx-stroke-width: 10px;");
        Line line2 = new Line(40, 40, 40, 40);
        line2.startXProperty().bind(widthProperty().subtract(40));
        line2.endYProperty().bind(heightProperty().subtract(40));
        line2.setStyle("-fx-stroke: red; -fx-stroke-width: 10px;");
        getChildren().addAll(line1, line2);
    }
}