Controller
Controller.Java

```java
for (int i = 0; i < model.getCurrentBoard().length; i++)
        for (int j = 0; j < model.getCurrentBoard()[i].length; j++) {
            int tempi = i;
            int tempj = j;
            view.getBoard()[i][j].addActionListener(new ActionListener() {
                public void actionPerformed(ActionEvent actionEvent) {
                    model.setValue(tempi, tempj);
                    if (!model.hasWinner() && !model.boardFull()) {
                        model.setNextPlayer();
                        model.resetUndo();
                        view.changeTurn();
                    }
                }
            });
        }
```

Model
Model.Java

```java
public void setValue(int x, int y)
{
    setBoard(prevBoard,currentBoard);
    currentBoard[x][y] = player;
    view.update();
    if(hasWinner())
        view.gameEnd("Winner");
    else if(boardFull())
        view.gameEnd("Game Ended in Tie");
}
```

View
View.Java

```java
public void update() {
    for (int i = 0; i < board.length; i++)
        for (int j = 0; j < board[i].length; j++) {
            board[i][j].setText(model.getCurrentBoard()[i][j]);
            board[i][j].setEnabled(model.getCurrentBoard()[i][j].equals(""));
        }
    changeTurn();
}
```

Strategy

BoardFormatter.Java

```java
public interface BoardFormatter {
    public Color formatColor();
    public Font formatText(String font);
}
```

Concrete Strategy

RedFormatter.Java, BlueFormatter.Java

Create and Plug-in Concrete Strategy

Controller.Java

```java
JButton red = new JButton("Red");
red.setBounds(0, 0, 200, 100);
red.addActionListener(choose_color(new RedFormatter()));
```

```java
public ActionListener choose_color(final BoardFormatter format) {
    return new ActionListener() {
        public void actionPerformed(ActionEvent event) {
            formatter = format;
            color_select.dispose();
            font_select();
        }
    };
}
```

```java
public void start_game()
{
    view.format(formatter, font);
```

View.Java

```java
public void format(BoardFormatter formatter, String font_style)
{
    background = formatter.formatColor();
    font = formatter.formatText(font_style);
    setUp();
}
```