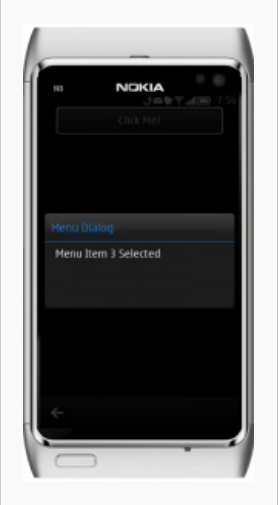
Bouncing Menu using Qt Quick

This article demonstrates how to create a drop-down menu with gravitational feel using Qt Quick.

Introduction

In this article we will see how to create a drop-down menu with gravitational feel. To complete this example we need QML Easing effect. We will create five Rectangles and will drop them from top to bottom with *OutBounce* easing effect.

Menu with gravitational feel



Selected menu

Note: This image isn't animated. Try the example to see it working!

Implementation

Let's create an empty QML project. We create a Rectangle on the top of the screen which we call the menu bar and five different Rectangles with same state.

```
Rectangle{
        id:rectMenuBar
        border.color: "White";
        border.width: 2
        height: 50
        width: 300
        radius: 5
        anchors.horizontalCenter: parent.horizontalCenter
        anchors.top: parent.top
        gradient:  Gradient {
            id: idleColor
            GradientStop { position: 0.0; color: "#434343"    }
            GradientStop { position: 0.4; color: "#343434"    }
            GradientStop { position: 0.6; color: "#202020"    }
            GradientStop { position: 1.0; color: "#191919"    }
        }
        opacity: mouseAreaMenu.pressed ? 0.5 : 1.0
        MouseArea
        {
        id:mouseAreaMenu
            anchors.fill: parent
             anchors.margins: -5
            height: parent.height+20
            width: parent.width +20
```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```
            onClicked: {
                 if (rectMenu1.state == '') rectMenu1.state = "right"; else
rectMenu1.state = ''
                   if (rectMenu2.state == '') rectMenu2.state = "right"; else
rectMenu2.state = ''
                     if (rectMenu3.state == '') rectMenu3.state = "right"; else
rectMenu3.state = ''
                       if (rectMenu4.state == '') rectMenu4.state = "right"; else
rectMenu4.state = ''
                         if (rectMenu5.state == '') rectMenu5.state = "right"; else
rectMenu5.state = ''
                console.log("Menu Clicked");
            }
        }
        Text {
            id: textMenu
            text: qsTr("Click Me!")
            color: "white"
            anchors.verticalCenter: rectMenuBar.verticalCenter
            anchors.horizontalCenter: rectMenuBar.horizontalCenter
            font.pixelSize: 21
        }
    } // end of menu
```

When user clicks on the menu bar it changes the current *state* of the Rectangles to a new *state* with the `PropertyChanges` of its *y* value and also change its position with an *OutBounce* easing effect.

```
…
  states : State {
                name: "right"
                PropertyChanges { target: rectMenu5; y: window.height - 390; }
            }
            transitions: Transition {
                NumberAnimation { properties: "y"; easing.type: Easing.OutBounce;
duration: 1000 }
…
```

Each menu item has a MouseArea event, which displays a Dialog when clicked.

```
CommonDialog{
        id:dialog
        titleText:  "Menu Dialog"
        onClickedOutside: close();
        content: Item {
            id: itemDialog
            Text {
                id: textDialog
                text:""
                font.pixelSize: 21
                color: "white"
                anchors.top: parent.top
                anchors.topMargin: 10
                anchors.left: parent.left
                anchors.leftMargin: 20
            }
```


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```
        }
    }
```

Summary

This article shows is a very basic use of QML Easing effect to create an animated menu item which has a gravitational/bouncing feel.

Source Code

- The full source code of the example is available here: File:BouncingMenuQML.zip

Reference

- Animation: Easing Example

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