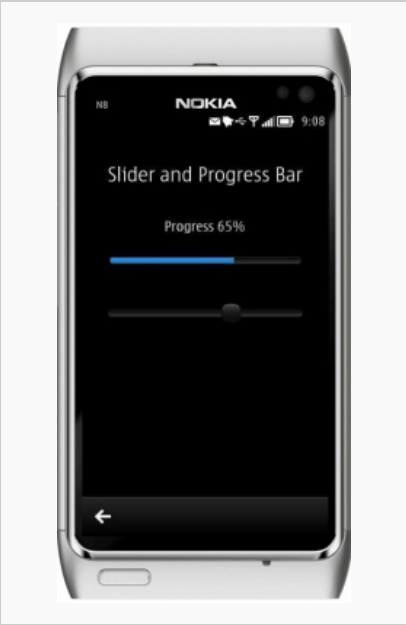
Slider and Progress Bar in Qt and WP7

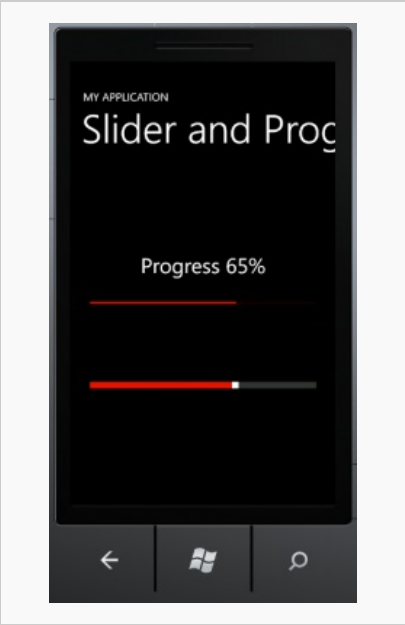
This code example shows how to create a slider and progress bar, and link their values together, using Qt and WP7.

Introduction

This article shows how to create a slider and progress bar in Qt (QML) and Windows Phone 7. When the slider value is changed we will change the value of the progress bar accordingly. A screenshot of the UI on both platforms is shown below:



Slider and Progress Bar in QML



Slider and Progress Bar in WP7

Note that in both cases we update the text and progress bar in an event handler when the slider changes. We could also have used data binding to link the slider and progress bar values.

Implementation

Qt Project (MainPage.qml)

We create a QML Slider Element and ProgressBar with a `minimumValues` of 0 and a `maximumValues` of 100:

```
Slider {
        maximumValue: 100
        minimumValue: 0
        value: 0
        stepSize: 5
        width: 300
        anchors.centerIn: parent
        onValueChanged:
        {
            progressValue = value;
            targetProgressBar.value = value;
        }
    }

ProgressBar {
        id: targetProgressBar
        minimumValue: 0
        maximumValue: 100
        value: 0
        indeterminate: false
        width:280
        anchors.top: textValue.bottom
        anchors.topMargin: 30
        anchors.horizontalCenter: parent.horizontalCenter
    }
```

When we move the `Slider` it emits the `valueChanged` signal, which is handled in `onValueChanged()`. In the handler we update the value of the Progress Bar, which we reference by its id. In the handler we also update the property `progressValue` with the slider value - while not shown here, this is a property of the parent object which is used to populate a text field with the slider value.

WP7 Project (MainPage.xaml)

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For Windows phone we add a Slider, TextBlock and a ProgressBar in the XAML page, and set the minimum and maximum values to 0 and 100 respectively. For example:

```
<Grid x:Name="ContentPanel" Grid.Row="1" Margin="12,0,12,0">
            <Slider Minimum ="0" Maximum="100"  Height="84" HorizontalAlignment="Left" Margin="12,363,0,0" Name="slider1" VerticalAl
            <TextBlock Height="71" HorizontalAlignment="Left" Margin="12,148,0,0" Name="textBlock1" Text="Progress 0%" VerticalAlign
            <ProgressBar Minimum="0" Maximum="100" Value="0" Height="33" HorizontalAlignment="Left" Margin="12,225,0,0" Name="progre
</Grid>
```

When user moves the Slider the event handler `slider1_ValueChanged()` is called. This is where we update the progress bar and text block.

```
private void slider1_ValueChanged(object sender, RoutedPropertyChangedEventArgs<double> e)
        {
            string msg = e.NewValue.ToString("0");
            this.textBlock1.Text ="Progress "+ msg+"%";
            progressBar1.Value = e.NewValue;
        }
```

Summary

This article is being created for beginners to show how the UI elements can relate with each other in both the platforms.

Source Code

- The full source code of Qt example is available here: File:ProgressSliderQML v1.1.zip
- The full source code of WP7 example is available here: File:ProgressSliderWP7 v1.1.zip

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