Scrolling horizontal menu bar in Qt and Windows Phone

This article demonstrates how to create scrollable/flick-able objects in Qt and WP7.

Introduction

This code example creates a horizontally scrolling menu bar. When an item in the menu is selected we perform some task - in this case we display an image in the middle of the screen.

The Qt example uses the QML Flickable Element and Windows Phone uses the ScrollViewer class.

Scrolling Menu Bar in Qt

Scrolling Menu Bar in WP7

Implementation

Qt Project (main.qml)

First we take few icons and thumbnail images in the project directory. We will add the icons as the menu item and the thumbnails are the images to be displayed on the middle of the screen on each menu item clicked. Lets create a `Rectangle` and a child `Image` inside it, to create the screen's middle image area.

```
Rectangle{
            height: 113
            width: 150
            x:110
            y:170
            Image {
                id: thumbnails
                source: "images/thumbnails/1.jpeg"
            }
}
```

Now create another Rectangle on the bottom of the screen that defines the area of the menu bar. We add all the icon images inside a Flickable area.

```
Flickable {
                id: flickable
                anchors.fill: parent
```


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```
                contentWidth: flickable.width *3.9; contentHeight: flickable.height
          Image {
             id: image1
             source:  "images/menuicons/higloss-accessibility.jpg"
             x:0
             smooth: true
             opacity: !accessibility.pressed ? 1 : 0.5
             MouseArea {
                 id:accessibility
                // anchors.fill: parent
                 anchors.centerIn: parent
                 width: parent.width+20
                 height: parent.height+20
                 onClicked: changeImage("2.jpeg");
              }
         }

// Add all others icon images here
…
```

On each click of the Menu Item we call the JavaScript function `changeImage()` to change the image on the middle of the screen. This is just to show the even handle on each menu item clicked.

```
function changeImage(imageName)
   {
       thumbnails.source = "images/thumbnails/"+imageName;
       }
```

Tip: Note that this implementation uses the `Flickable` directly. It would possibly be even easier to use a horizontally aligned `ListView` for the menu - this is also a flickable element.

WP7 Project (MainPage.xaml)

First add the icons and the thumbnail images in the WP7 project:

1. **Right Click** project explorer->**Add**->**New Folder** and name as **Images**
   - inside **Images** folder we create two more folders **MenuIcons** and **Thumbnails**.
2. Put the icons and thumbnail images in the **MenuIcons** and **Thumbnails** folder;
   - **Right-Click** project explorer->**Add**->**Existing Item** to add the images in the respective folders.

Lets create the area to display screen's middle image.

```
<Image Name="ImageMain" Source="/Images/Thumbnails/5.jpeg" Height="113" Width="150"
HorizontalAlignment="Left" VerticalAlignment="Top" Margin="150,200,130,102"  />
```

Use the ScrollViewer to create a *Horizontal* scrolling area. We add images inside the `ScrollViewer` which represents the scroll bar menu item.

```
<StackPanel Margin="12,0,12,0">
                <ScrollViewer VerticalScrollBarVisibility ="Disabled"
HorizontalScrollBarVisibility="Hidden">
                    <Grid Margin="0,500,0,0" VerticalAlignment="Top"
HorizontalAlignment="Left">
```


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```
                        <Image Name="Image1" Source="/Images/MenuIcons/higloss-
calendar.jpg" Height="102" Width="130" HorizontalAlignment="Left"
VerticalAlignment="Top" Margin="0,0,130,102" MouseEnter="Image1_MouseEnter" />
                        <Image Name="Image2" Source="/Images/MenuIcons/higloss-add.jpg"
Height="102" Width="130" HorizontalAlignment="Left" VerticalAlignment="Top"
Margin="130,0,0,102" MouseEnter="Image2_MouseEnter"/>
                        <Image Name="Image3" Source="/Images/MenuIcons/higloss-
agenda.jpg" Height="102" Width="130" HorizontalAlignment="Left" VerticalAlignment="Top"
Margin="260,0,0,102" MouseEnter="Image3_MouseEnter"/>
                        <Image Name="Image4" Source="/Images/MenuIcons/higloss-
alert.jpg" Height="102" Width="130" HorizontalAlignment="Left" VerticalAlignment="Top"
Margin="390,0,0,102" MouseEnter="Image4_MouseEnter"/>
                        <Image Name="Image5" Source="/Images/MenuIcons/higloss-
announcement.jpg" Height="102" Width="130" HorizontalAlignment="Left"
VerticalAlignment="Top"  Margin="520,0,0,102" MouseEnter="Image5_MouseEnter"/>
                        <Image Name="Image6" Source="/Images/MenuIcons/higloss-
attention.jpg" Height="102" Width="130" HorizontalAlignment="Left"
VerticalAlignment="Top"  Margin="650,0,0,102" MouseEnter="Image6_MouseEnter"/>
                        <Image Name="Image7" Source="/Images/MenuIcons/higloss-
award.jpg" Height="102" Width="130" HorizontalAlignment="Left" VerticalAlignment="Top"
Margin="780,0,0,102" MouseEnter="Image7_MouseEnter"/>
                        <Image Name="Image8" Source="/Images/MenuIcons/higloss-button-
record.jpg" Height="102" Width="130" HorizontalAlignment="Left" VerticalAlignment="Top"
Margin="910,0,0,102" MouseEnter="Image8_MouseEnter"/>
                        <Image Name="Image9" Source="/Images/MenuIcons/higloss-button-
repeat.jpg" Height="102" Width="130" HorizontalAlignment="Left" VerticalAlignment="Top"
Margin="1040,0,0,102" MouseEnter="Image9_MouseEnter"/>
                        <Image Name="Image10" Source="/Images/MenuIcons/higloss-button-
right-gold.jpg" Height="102" Width="130" HorizontalAlignment="Left"
VerticalAlignment="Top"  Margin="1170,0,0,102" MouseEnter="Image10_MouseEnter"/>
                        <Image Name="Image11" Source="/Images/MenuIcons/higloss-
calendar-add.jpg" Height="102" Width="130" HorizontalAlignment="Left"
VerticalAlignment="Top"  Margin="1300,0,0,102" MouseEnter="Image11_MouseEnter"/>
                        <Image Name="Image12"  Source="/Images/MenuIcons/higloss-
calendar-check.jpg" Height="102" Width="130" HorizontalAlignment="Left"
VerticalAlignment="Top"  Margin="1430,0,0,102" MouseEnter="Image12_MouseEnter"/>

                    </Grid>
                </ScrollViewer>

            </StackPanel>
```

On click of each menu item we change the middle screen image.

```
// Create source.
BitmapImage bi = new BitmapImage();
bi.UriSource = new Uri(@"/Images/Thumbnails/1.jpeg", UriKind.RelativeOrAbsolute);
ImageMain.Source = bi;
```

Source Code

- The full source code of Qt example is available here: File:ScrollMenuQt.zip
- The full source code of WP7 example is available here: File:ScrollMenuWP7.zip

Related Article on MeeGo

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- Scrolling Toolbar with Flickable

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