Connecting to a QObjects signal with JavaScript slot in Qt WebKit

Overview

This snippet demonstrates how to connect an exposed QObjects signal to a JavaScript slot with the Qt WebKit.

Preconditions

- Qt is installed on your platform.
  - Symbian S60:
    - Download Qt release from here: Qt Downloads
    - Install Qt: How to Install Qt
  - Maemo:
    - More information about Qt on Maemo can be found here: Qt4 Maemo port
- You've exposed the QObject as demonstrated in the article Exposing QObjects to Qt Webkit.

Code

First, we need to reference a HTML page and a JavaScript file with the resource file. The resource file also needs to be referenced from the project file.

WebKit_JS_signal.pro

```
QT += webkit
TARGET = WebKit_JS_slot
TEMPLATE = app
SOURCES += main.cpp \
    mainwindow.cpp \
    sampleqobject.cpp
HEADERS += mainwindow.h \
    sampleqobject.h
FORMS += mainwindow.ui
RESOURCES += resources.qrc
```

resources.qrc

Here we reference all the required resources, like #view.html, the jquery.js helper library, and #signal.js.

```
<RCC>
    <qresource prefix="/">
        <file>view.html</file>
        <file>jquery.js</file>
        <file>signal.js</file>
    </qresource>
</RCC>
```

view.html

This is the HTML we will display in the QWebView and where we'll reference the JavaScript files.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```


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```
<!-- Copyright (c) 2009 Nokia Corporation. -->
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
    <!-- You reference the resources with qrc:/ -->
    <!-- JavaScript includes -->
    <!-- jQuery http://jquery.com/ -->
    <script type="text/javascript" src="qrc:/jquery.js" />
    <!-- signal -->
    <script type="text/javascript" src="qrc:/signal.js" />

    <title>Signal</title>
  </head>
  <body>
    <h1>Demonstrates signals</h1>
  </body>
</html>
```

signal.js

```
/**
  * This is run after the the web page has been rendered.
  * $(document).ready documented here:
  * http://docs.jquery.com/Tutorials:Introducing_$(document).ready()
  */
$(document).ready(function() {
  try {
    /* This connects sampleQObjects signal to our slot */
    sampleQObject.signal.connect(slot);
    /* This calls a slot which then in turn emits the signal. */
    sampleQObject.slotThatEmitsSignal();
  }
  catch(e) {
    alert(e);
  }
});

function slot(object) {
  var objectString = object.sender +
                     " has emited signal " +
                     object.signalsEmited +
                     " times.";
  alert(objectString);
}
```

Postconditions

You've successfully connected an exposed QObject signal with a JavaScript slot with Qt WebKit.

See also

- Calling an exposed QObject slot from Qt WebKit with JavaScript

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