Mobile Application Development

Session 3 – Activities

The final product for this session can be found at:
http://www.dcs.bbk.ac.uk/lo/mad/madexamples/session3/classactivities/zedlandhotels/zedland-hotels.html

1. Get and Use JQuery Mobile

Libraries
For this activity, we will link to jQuery Mobile using the Google CDN.

Go to the Google CDN page and locate the section for the jQuery library. Copy the script tag for jQuery, and paste it into a new HTML page called *zedland-hotels.html*.

Now find the section for the jQuery Mobile library and stylesheet. Copy the jQM stylesheet link and paste this above the JQuery library link. Copy the jQM library link and paste this below the jQuery library link.

```
<head>
   <meta charset="utf-8">
   <title> Mobile App Development</title>
   <link rel="stylesheet" href="//ajax.googleapis.com/ajax/libs/ →
    jquerymobile/1.4.3/jquery.mobile.min.css" />
   <script src="//ajax.googleapis.com/ajax/libs/jquery/2.1.1/ →
    jquery.min.js"></script>
   <script src="//ajax.googleapis.com/ajax/libs/jquerymobile/1.4.3/ →
    jquery.mobile.min.js"></script>
</head>
```

jQuery mobile should now be ready to use. Save *zedland-hotels.html*.

We could have downloaded the actual files for the jQM libraries and included them in our applications directly. However, as no offline access is required we are using a CDN instead.

2. Creating a Basic JQM App

Inside *zedland-hotels.html*, create a element in the <body> section. Give this a *data-role* of *page* and an *id* of *home*.

```
<body>
  <div data-role="page" id="home">
  </div>
</body>
```

Now add a header, content, and footer section to the page.

```
 <div data-role="page" id="home">
    <div data-role="header">
      </div>
      <div data-role="content">
      </div>
      <div data-role="footer">
      </div>
  </div>
```

When this is done, add the following content to the page, using a <h1> for the header, <h2> element for the content and an <h4> for the footer.

header = *Zedland Hotel Finder*
content = *Hotels*
footer = *(placeholder) Navigation here*

Now, save your page.

You can view the page offline in the Chrome Canary Emulator. or Opera Emulator. However, it is recommended that you upload your page to the DCSIS server, and view the page live in your mobile device, or view it at: http://www.mobilephoneemulator.com/

You will note that the app is displaying in miniature. This is because we need to add a viewport instruction, to tell the browser not to zoom the application on loading.

Add the following instruction to the <head> above the script tags, and view the page again. This time it should render correctly.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

3. Creating a Multi-page jQuery Mobile App

Open zedland-hotels.html. In the body section, add another internal page after the one you previously created. Give it an *id* of *five*.

```
<div data-role="page" id="five">
    <div data-role="header">
        <h1>Five Star Hotels in Zedland</h1>
      </div>
      <div data-role="content">
        <p>Hotels</p>
      </div>
      <div data-role="footer">
        <h4>Navigation here</h4>
      </div>
  </div>
```

Next, in the *home* page content section, create a link to this new page using the jQM internal page link syntax.

```
<div data-role="content">
   <h2>Hotels</h2>
   <h4><a href="#five">Five Star Hotels</a></h4>
</div>
```

Now in the header of the *five* page, create a link for a *home* button in the header section, before the title.

```
<div data-role="header">
  <a href="#home" data-icon="home">Home</a>
  <h1>Five Star Hotels in Zedland</h1>
</div>
```

Note that jQuery Mobile will detect the *data-icon* attribute, and automatically render the link as a button.

Save you app and test it in an emulator. Or, upload it to the testing server, and view it on your mobile device. Or, test it at: http://www.mobilephoneemulator.com/

Finally, add further internal pages for four star and three star hotels in Zedland. Link from the *home* page to these new pages.

4. Adding External jQuery Mobile Pages

Create a new HTML page. Save this page as *newline-hotel.html*.

This page will be an external page. The reason this is an external page is that it is not as likely to be visited as the four internal pages we have created in the *zedland-hotels.html* app so far.

In this page, add a single internal page structure with the following markup and content.

```
<div data-role="page" id="newline">
  <div data-role="header">
      <h1>Five Star Hotels</h1>
    </div>
    <div data-role="content">
      <h2>Newline Hotel</h2>
      <ul>
        <li>Genuine *****</li>
        <li>Extra large rooms and suites</li>
        <li>Designer furniture</li>
        <li>Full size pool and full gym</li>
        <li>Michelin star restaurant</li>
      </ul>
    </div>
    <div data-role="footer">
     <h4>Navigation here</h4>
    </div>
</div>
```

Next, add a back button in the header before the <h1> element, using the *data-rel* attribute and value, *back*.

```
<a href="" data-rel="back">Go Back</a>
```

data-rel specifies an option for how a link should behave. Back - Moves one step back in history. Dialog - Opens a link as a dialog, not tracked in history. External - For linking to another domain. Popup - opens a popup window.

Finally, link to *newline-hotel.html* from the content section of the #five page in *zedland-hotels.html*.

Save you app and test it an emulator. Or, upload it to the testing server, and view it on your mobile device. Or view it at: http://www.mobilephoneemulator.com/

Next add three or four more five star hotels using an external page for each hotel. Call the new hotels: The Churchill, The Crookston and The Fox.

5. Pre-fetching pages

Because the Churchill Hotel is the most popular hotel and the *churchil-hotel.html* is the most visited page amongst the five star hotels, we will pre-fetch this page so that it is immediately available without any additional download time.

To pre-fetch the page we need to add *data-prefetch* to the link to the page from *zedland-hotels.html#five*.

```
<a href="churchill-hotel.html" data-transition="slidefade" →
data-prefetch>Churchill Hotel</a>
```

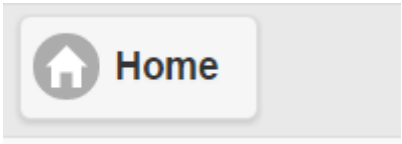
6. Page Transitions

No transitions are currently added to the Zedland hotels pages. We will start by adding *slidefade* transitions between our *#home* page *#five* page.

To do this we simply need to add a *data-transition* property and a transition value to the link from *#home* to *#five*.

```
<h4><a href="#five" data-transition="slidefade">Five Star →
Hotels</a></h4>
```

For the return journey, we will add a home button in the header of the *#five* page.



This is done by adding a simple link to #home before the <h1> in the header. We then specify an icon to use for the link using the *data-icon* property. Next, we specify the data transition to use, again *slidefade*. Finally, we need to specify the direction of the transition, in this case *reverse*.

```
 <a href="#home" data-icon="home" data-transition="slidefade"
→  data-direction="reverse">Home</a>
```

Note that testing page transitions and other touch specific features in an emulator is difficult or not possible at all. To view transitions you will need to test your pages in-situ on your mobile device or devices.