CP317 - Software Engineering- Fall 2016

Assignment 2: Hello Laurier

Due date: Wednesday November 2, 11:30PM

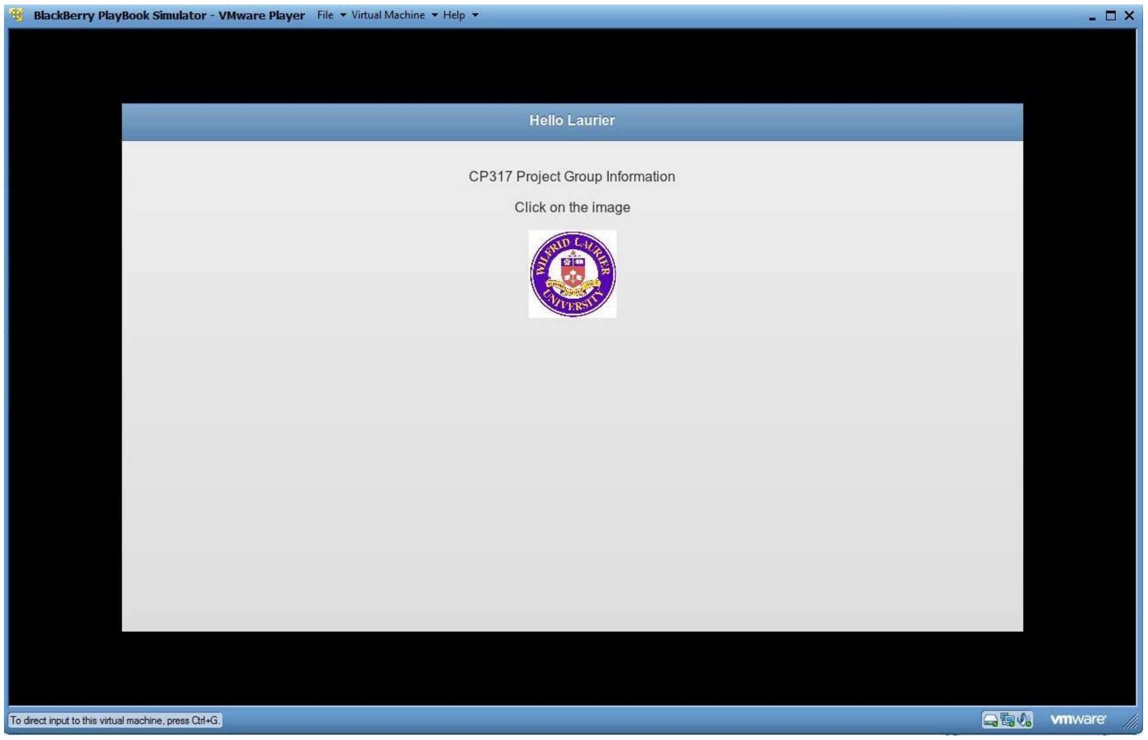
jQuery is a popular Javascript library for developing websites. jQuery Mobile is the jQuery version for mobile devices. All mobile web designers need to know jQuery Mobile. Furthermore, thanks to the Cordova project, we may use jQuery Mobile to develop our apps. You will test the app with a browser (more on this later) and then install it on an Android emulator/simulator.

What you have to do: you will develop a web app to provide information on members of your group. **Bonus:** you will receive a bonus if you compile the app into an Android app (and run it on a physical device or an emulator.)

Requirements:

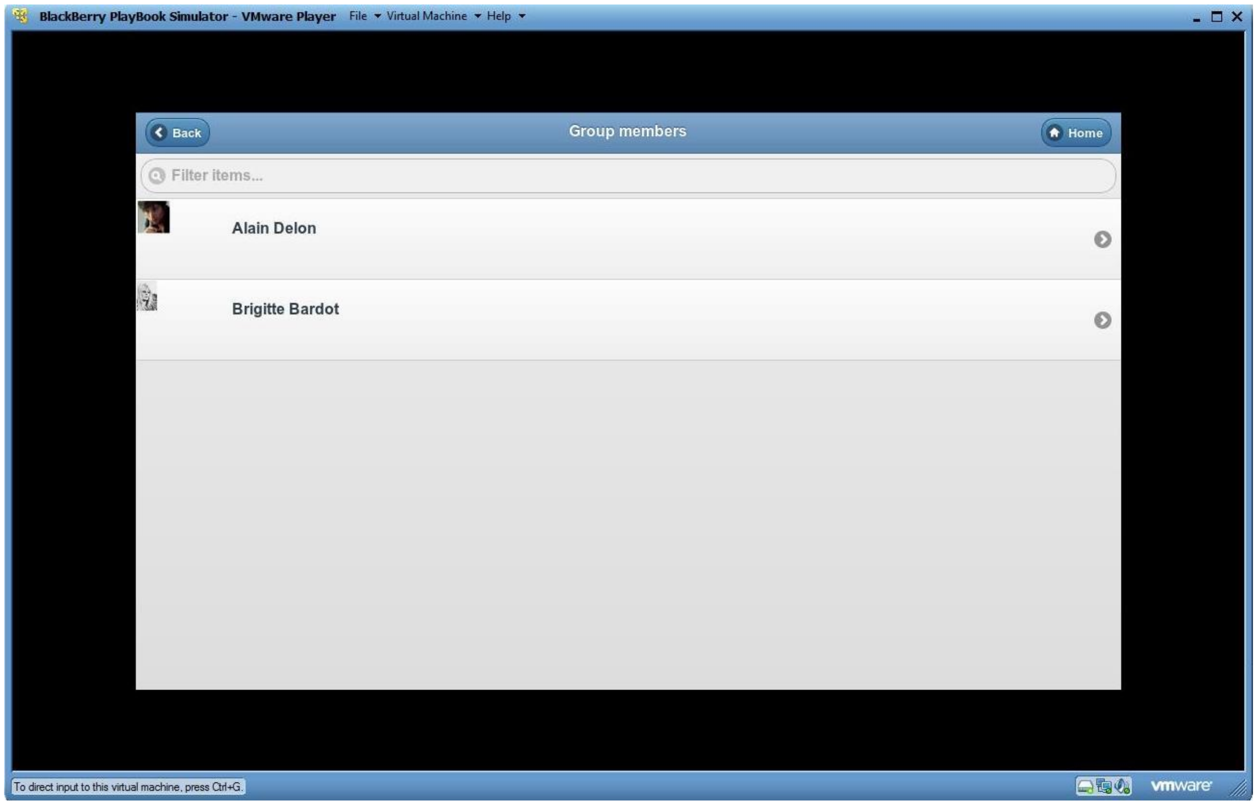
Step 1: the first level page

The app starts by displaying a page with a picture on it, as follows.


BlackBerry PlayBook Simulator - VMware Player
File
Virtual Machine
Help
Hello Laurier
CP317 Project Group Information
Click on the image
To direct input to this virtual machine, press Ctrl+G.
vmware

The header bar contains the name of the app (Hello Laurier). The picture here is the Laurier logo but feel free to make your own picture that should be representative of your group. When the user clicks (or touches) the picture--and the picture only-- the second level page is displayed, as below. Read up on the img tag, the onclick function, the $.mobile.changePage jQuery function. Note: the image should not be implemented by a button. If the user clicks outside the picture, nothing should happen.

Step 2: the second level page


BlackBerry PlayBook Simulator - VMware Player
File
Virtual Machine
Help
Back
Group members
Home
Filter items...
Alain Delon
Brigitte Bardot
To direct input to this virtual machine, press Ctrl+G.
vmware

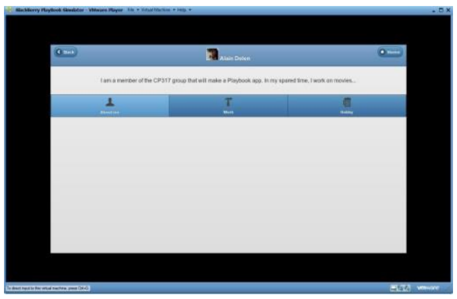
The second level page provides the names of the members of your group using basic list view elements. For each name, there should be a thumbnail photo of the person. Make up some imaginary group members so that the list will have at least 3 people.

The header bar should be titled "Group members" with a back button on the left side, and a home button on the right side. The back button should bring the app back one page, as usual. The home button should bring the app back to the first page. For now, the two button points to the same page, but this will not be the case for the third level pages. The home button should use the standard home icon.

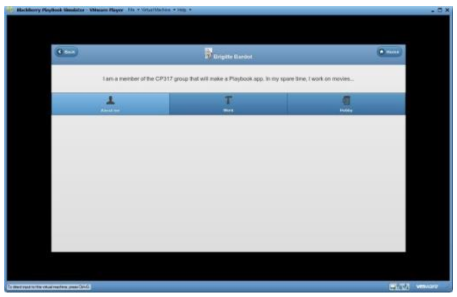
Under the header, there is a data filter bar.

When the name or the corresponding thumbnail of the list is clicked, a third level page is presented, giving the "about" information on the person.

Step 3: the third level pages

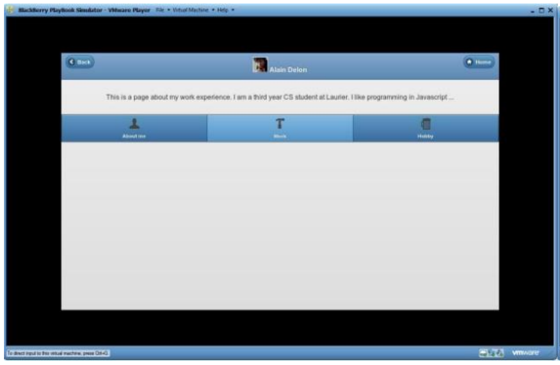


I am a member of the CP317 group that will make a Playbook app. In my spared time, I work on movies...

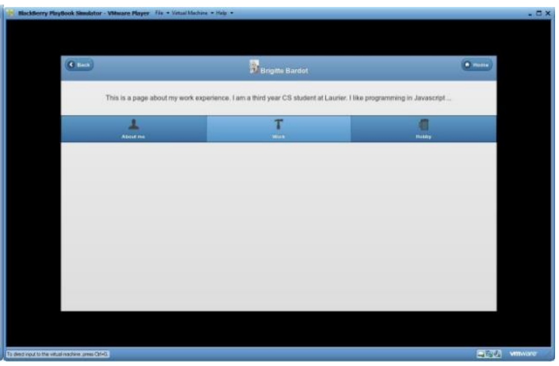


I am a member of the CP317 group that will make a Playbook app. In my spare time, I work on movies...

The first third-level page presents the "about" information on the person; this is a summary, or a short vita, of the person. See the two figures above. The footer bar contains three navbars items: about, work, and play. Each item gives rise to a different page. The about item gives general information about the person. The work item gives work related information about the person. See below.

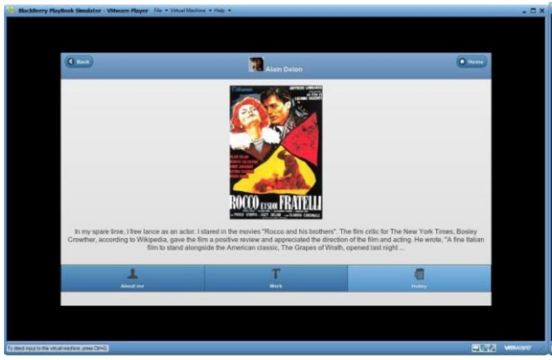


This is a page about my work experience. I am a third year CS student at Laurier. I like programming in Javascript ...

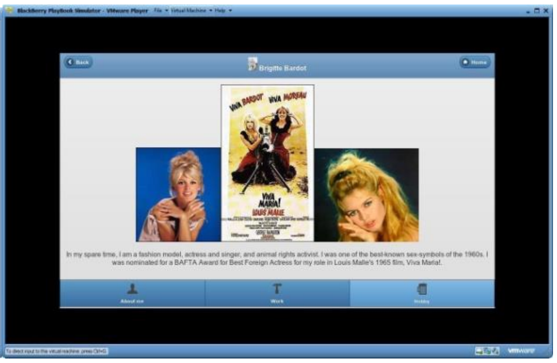


This is a page about my work experience. I am a third year CS student at Laurier. I like programming in Javascript ...

The play item gives leisure information about the person. See below.



In my spare time, I free lance as an actor. I stared in the movies "Rocco and his brothers". The film critic for The New York Times, Bosley Crowther, according to Wikipedia, gave the film a positive review and appreciated the direction of the film and acting. He wrote, "A fine Italian film to stand alongside the American classic, The Grapes of Wrath, opened last night ...



In my spare time, I am a fashion model, actress and singer, and animal rights activist. I was one of the best-known sex-symbols of the 1960s. I was nominated for a BAFTA Award for Best Foreign Actress for my role in Louis Malle's 1965 film, Viva Maria!.

The footer is persistent. The item should be highlighted properly (class="ui-btn-active ui-state-persist") . The page should slide up (data-transition="slideup"). However, the back and home button should use the usual slide transition. Each of the three navbar buttons should have a distinct *custom* icon, see the source of this page for more information.

The header contains the back and home button with the usual meanings. *In particular, clicking on the back button will force a transition to the second level page*. It also contains the name and thumbnail of the person. This requirement applies to all pages of the third level.

Make your app interesting by adding images, links. Say something interesting about yourself and your project app.

Other requirements:

For headers and footers, use data-theme = "a". Use only single page files.

Your app should have a custom icon.

You can download the jQuery package here

Your app should work even when the device has no internet connection. The jQuery Mobile framework is composed of three files: `jquery.mobile-1.4.4.min.css`, `jquery-1.11.1.min.js`, `jquery.mobile-1.4.4.min.js` . An html file would link to the files as follows.

```
<link rel="stylesheet"
href="http://code.jquery.com/mobile/1.4.4/jquery.mobile-1.4.4.min.css" />

<script src="http://code.jquery.com/jquery-1.11.1.min.js”></script>

<script src=”http://code.jquery.com/mobile/1.4.4/jquery.mobile-
1.4.4.min.js"></script>
```

Note: since the making of this assignment, jQuery and jQuery Mobile may have come out with newer versions. Use those newer versions.

For your app to use jQuery offline in the Android device/emulator, you will have to download the files into the app's directory and link locally to them, as follows.

```
<link rel="stylesheet" href="jquery/jquery.mobile-1.4.4.css" />
<script src="jquery/jquery-1.11.1.min.js"></script>
<script src="jquery/jquery.mobile-1.4.4.js"></script>
```

Of course, to better organize your development, you may want to create a directory with name such as "jQuery" and put the three files into it. But then you should properly point to them with your links.

You can download the jQuery icon pack from here.

The assignment should be named and submitted in the way discussed in class. In particular the submitted file should be named such as g4a2.zip. Failure to follow this guide will result in mark reduction.

Other requirements:

- The default navigation bar may not always reside at the bottom of the screen. If the content of the page is short (say, a sentence of text), the bar normally would be at the middle of the screen. For your app, *the bar should be at the bottom regardless of the size of the content.*

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Work flow for making an Android app

1. Install the Java Development Kit
2. Install the Android sdk.
3. Create the app with Cordova . Read the Cordova Android Development Guide.
4. Editing the file index.html and adding javascript and html files as needed (using Eclipse, or any editor of your choice).
5. Test the app with a browser.
6. Using Cordova to install the app in an Android emulator or device.

We are going to describe each of the above four steps in detail below.

Create the app with Cordova

Down load and install Cordova. Read the guide. You will use the Cross Platform (CLI) workflow. Since we are going to install our app on an Android emulator, read the Android platform guide. Now, you can create a new project with the command line (say, you are group 3 doing assignment 2)

```
$ cordova create g3a2 ca.wlu.g3a2 G3A2
```

Editing the app files

You may use Eclipse, or any editor of your choice (I use Note++), to edit your html and javascript files.

Test the app with a browser

Cordova creates an index.html file that have a number of meta-tags for the Android devices. These meta-tags are not executed by the browser. What this means is, unless you want to access specific hardware features of the device, you may test/debug your app with a browser. Now, unfortunately, the problems start! You may use Chrome, Firefox, or Internet Explorer to debug the app. But, …

If you use Chrome to debug the app, it may say "cannot load file ..." For security reason, Chrome does not load local files unless explicitly told to do so. The document suggests to start Chrome from the Command Prompt with "chrome.exe --allow-file-access-from-files", see the discussion here. In Widows 7's Command Prompt, navigate to your Chrome app directory, such as (change user name as appropriate) C:\Users\choang\AppData\Local\Google\Chrome\Application, then type : chrome.exe --allow-file-access-from-files. This will open a new Chrome window, use it to open the local files. *Unfortunately, the –allow-file-access-from-files—command does not work on my system*, may be it will work on yours. Chrome has an extension called Ripple that supposedly runs an Android simulator. If you can make it work, let me know!

Firefox and IE could access local files. When IE attempts to access a local file, it will pop up a window to ask for permission, click on the button "allow blocked content". A similar mechanism works with Firefox. You are recommended to use Firefox over IE.

Using Cordova to install the app in an Android emulator or device

Now we come to the fun part. Assuming your app works great inside a browser. You can install it on an emulator or a real device. See the Android platform guide for that. If your CPU is an Intel and supports HAXM, from Eclipse you can download the HAXM and the Intel x86 Atom System Image to run a much faster emulator. The Cordova build command will build an apk file. This file can be installed in a device or emulator.

Instruction submission:

Name your app with our naming convention. Zip the directory containing the app and submit this zip file. The instructor will test your app with a browser first (Firefox), and then he will test it on a device. It is very important that you name your app properly. For example, if you are group 4, your app (and its root folder) should be name g4a2. Let your instructor know at the submission page if you are successful in installing the app in an Android emulator or device (and submit the appropriate files, including the apk file)