Mobile Web User Interface Libraries

Overview

The purpose of this lab is to try out a mobile web user interface library. The recommended library is Onsen UI.

You could also use other framworks like Ionic or Framework7 och acheive the same purpose, which are considered good options, while Ionic has build tools you need to install. Onsen UI and Framework7 can both run in the browser with no build steps, just plain HTML and JS files.

The goal is that after completing this lab you will have knowledge of the capabilities offered by mobile web UI libraries and will be able to create basic UIs for mobile devices.

To create user interfaces is known to be a time consuming task on most systems and platforms. For web apps, libraries like jQuery (with add-on modules) have made the development user interfaces considerably more straightforward, compared to using "plain" HTML/CSS/JS. Such libraries handle platform differences, and provide high-level abstractions that vastly reduces the amount of code needed to be written by app developers.

For mobile applications, libraries like Onsen UI have made it much easier to develop "mobile friendly" interfaces, that mimic the typical interaction techniques used by mobile devices.

The task

The task is to make a web app according to the exercises listed below.

The app created in the lab is meant to be run in a mobile web browser. You can develop in a desktop browser.

Note that if using Ionic the primary target is a native app, and it may not be totally straightforward to run this in a web browser.

Examination

We will ask you to account for your work orally to one of the course staff, so prepare for questions on your lab work so that each of the group members can account for the various parts.

Useful Links

Getting started with Onsen UI:

Download Onsen Ui files:

https://onsen.io/v2/guide/installation.html#installation

Tutorial:

https://onsen.io/v2/guide/

Example (use View Source to see the HTML), using Onsen v1. You'll might want to cross-referene with the documentation -- which also is fairly rich!

http://kindborg.com/talks/2017/DM2518-Frameworks/onsenui-example/index.html

Get jQuery from here:

https://jquery.com/download/

You can also use a CDN (for example google), include this in your <header> tag:

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>

If you want to run a hosted version (and are on-line all the time), just link your html to these three links:

<link rel="stylesheet" href="https://unpkg.com/onsenui/css/onsenui.css">

<link rel="stylesheet"
href="https://unpkg.com/onsenui/css/onsen-css-components.min.css">

<script src="https://unpkg.com/onsenui/js/onsenui.min.js"></script>

You can run your Evothings Workbench from a desktop browser too, so you don't have to reload between each save? (there are many other tools to do auto-reload, not very fancy thing, but sweet to have)

The URL you need to write is:
https://deploy.evothings.com/connect/YOUR-CONNECT-CODE

Webapp Exercise 1 (2p)

Make a mobile web app for doing relaxation practices (or something else you'd rather do) using Onsen UI (or similar library) with the following screens:

- Main page: List of names of practices. Clicking a list item goes to the corresponding page. There is also a button with the text "About" or similar. Clicking this button opens the about sub-page.
- Sub-pages: Show a description of how to do a practise. The page should have an image and a text. You can use texts for practices available here:https://github.com/mikaelkindborg/evo-demos/blob/master/Demos2014/relaxation-beacons/index.html
- Photos are available here: https://github.com/mikaelkindborg/evo-demos/tree/master/Demos2014/relaxation-beacons/photos
- About sub-page: Info about the app and the lab group.

This makes for a main page and 4 sub-pages (About page and 3 relaxation practices).

Sub-pages should have back-buttons that go back to the main page.

Experiement with setting iOS look and Android look (see the HTML source code for this example, line 9 and 10):

http://kindborg.com/talks/2017/DM2518-Frameworks/onsenui-example/index.html

Webapp Exercise 2 (2p)

Same app content, but with a Tab bar for navigating between the pages, instead of a list.

Documentation for the tab bar: https://onsen.io/v2/api/js/ons-tabbar.html

The app should have the following tabs:

- The about page should be in the first tab shown
- Pages for the 3 relaxation practices should be in tabs
- That makes 4 tabs in total

Experiment with putting icons on the tabs.

Publish this exercise as a separate HTML page (keep the first version from Exercise 1 and make a copy).

Webapp Exercise 3 (2p)

Customise the UI of the app:

- Set custom colors and fonts sizes for UI elements.
- Header bar in one color
- About button (in Exercise 1) in another color
- Set bigger font size for list items and button

To do this use CSS rules.

Webapp Exercise 4 (2p)

Add more UI-elements.

Examples:

- Make a switch on each one of the practise pages to mark a practise as "done". Tutorial is here: https://onsen.io/v2/api/js/ons-switch.html#tutorial
  You don't have to save these settings.

- Add a button to the right side of the top navigation bar. See this page for how to do this: https://onsen.io/v2/api/js/ons-button.html.
- Make the button open a dialog: https://onsen.io/v2/api/js/ons-dialog.html
- Make a Side menu ("Splitter") to navigate pages or do something useful. Tutorial: (Länkar till en externa sida.)Länkar till en externa sida.https://onsen.io/v2/api/js/ons-splitter-content.html (Länkar till en externa sida.)Länkar till en externa sida.

Have fun!