Mobile Application Development

Final Marked Assignment (FMA)

Introduction

The Mobile Application Development FMA accounts for 75% of the module marks. Documentation should be submitted in Moodle, and the implemented mobile application published on the DCSIS student web server before the assignment deadline specified for your class. Your application should be published at:

http://titan.dcs.bbk.ac.uk/~username/madfma/index.html

FMA Overview

For the TMA for the module, you designed and partially implemented a jQuery Mobile accommodation finder application for the University of Zedland. For the FMA, you will add a number of advanced features and some advanced functionality to that application. This will include:

1) Device integration

2) Content presented in collapsible sets

3) A jQuery Mobile form

4) Application of a colour swatch

5) Geolocation

6) Local storage

7) Touch events

Marks (15%) will also be awarded for the overall quality of the completed application, including effectiveness of design, usability and standards compliance.

Deliverables for Assessment

1) At least two examples of device integration (e.g. phone, SMS, MMS, etc.). (5%)

2) At least one example of page content presented using a jQM Collapsible Set. (5%)

3) A registration form. The form should be built along jQuery Mobile/mobile application guidelines. It should have the following fields: Student No., First Name, Last Name, Programme (from a list of programmes), Start Date,

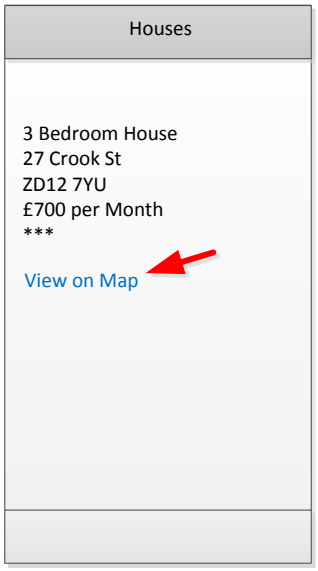
Requires (e.g. house, flat, room). Field controls should be appropriate for the data. The form must work *properly*, but you are not required to implement validation or programmatic form submission (e.g. PHP). (15%)

4) You should generate an appropriate colour swatch using ThemeRoller, and apply that swatch to your application (ideally, the swatch should implement the colours you used in your original design). You may apply the swatch on a page-by-page basis. Howvever, full marks will only be given if you apply the swatch at global level, by changing the framework default configuration. (25%)

5) Advanced Programming (35%)

a) Geolocation

On the details page of at least one house, flat or room, you should include a button or link that when clicked allows the user to view the location of the house, flat or room on a Google map. The user should also be able to see his/her geolocation in relation to the property.



When the user clicks on the link a new page (a popup or normal page) should be opened which (1) shows the location of the property on a Google Map (2) Shows the user's location on the map. The coordinates for the property should be passed in a querystring from the sending page to a script file. The script should

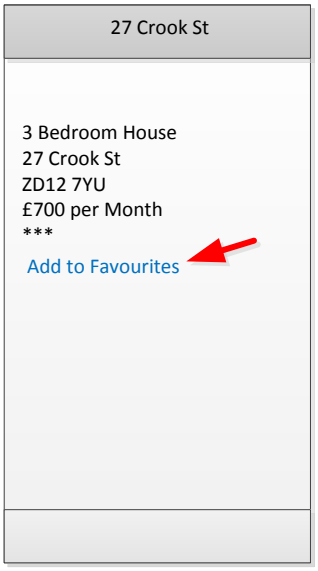
- Test for geolocation capability
- Pass the user's geolocation to the Google maps API to construct an appropriate map and apply a marker for the user's location.

- Extract the coordinates for the latitude and longitude of the property from the querystring. This can be done using any appropriate JavaScript string manipulation method.
- Pass the latitude and longitude coordinates of the fixed location to the Google maps API to apply a marker for the property location.

Note that you should use only one (dynamic) page for displaying maps for all properties. However, only one property and user location should be displayed at any one time. Full marks will be given for the inclusion of a custom clickable infowindow for each property marker.

b) Local Storage

On the details page of each house, flat or room in your application, you should include a button that allows the user to add the property to a list of favourites.



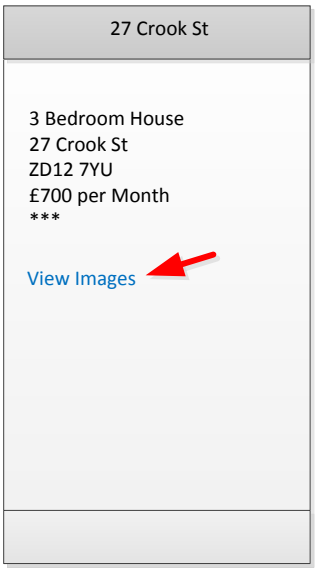
When the user clicks the button, the property details (e.g. the name) should be saved into local storage. The user should also receive confirmation (e.g. an alert) if the property has been added to local storage.

You should also include in your application a page where the user can view favourites. This page should contain links or buttons that when clicked take the user to saved property pages.

You should start by adding just one property to local storage, and allowing the user to retrieve its details. However, to gain full marks for this task, users should be able to add as many properties to favourites as they want, and view them in the favourite's page.

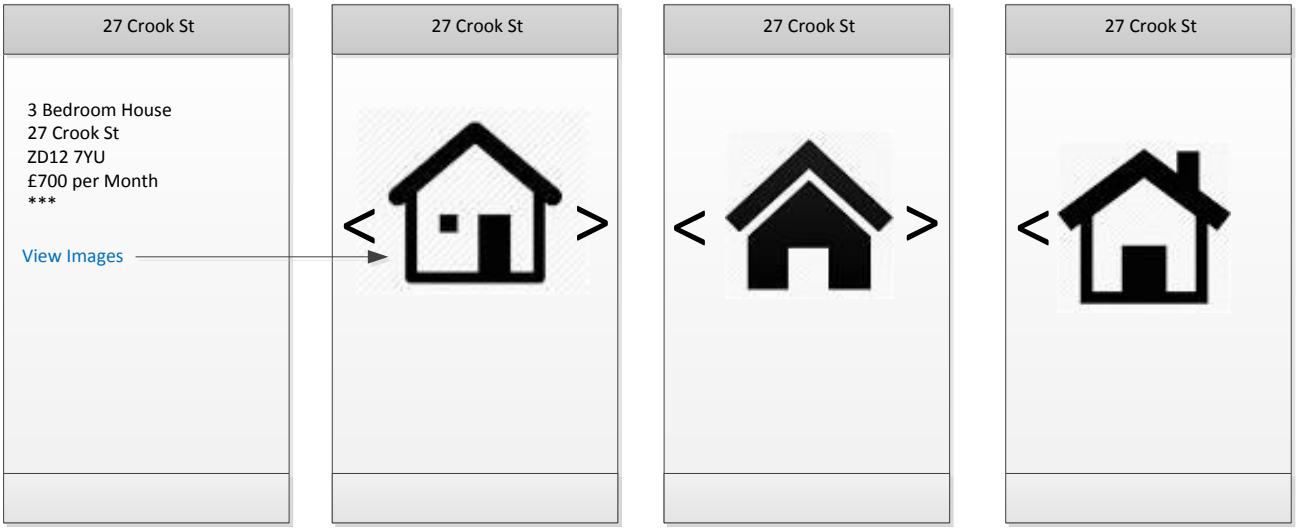
c) Physical Events

On the details page of at least one property, you should include a *view images* link.



When the user clicks the link, they should be taken to an image of the property (This can be on a new page or in a popup). From this image, the user should be able to swipe navigate to and from two further images of the property (Note that the actual images are not important. You can use images of an actual

property, or you can use placeholder images. What is important is the functionality).



Note that this task should be done programmatically. No marks will be awarded for using a plug-in.

Completing the FMA

The FMA must be completed and submitted electronically in the assignment dropbox in Moodle BEFORE the FMA deadline for your class.

Begin your work early, as the FMA is a substantial task that requires planning and effort to complete satisfactorily.

Getting support

Support for the FMA work will be available from your tutor until two weeks before the assignment deadline.

Getting feedback

The FMA well be marked by your tutor and then second marked by another tutor. This process can take up to eight weeks. Once all the required marking and second marking has been completed, your grade and your feedback will be uploaded to Moodle.

Backing up files

Always keep a back-up copy of all work submitted for assessment in case of unforeseen submission problems.

Plagiarism

Plagiarism, which is claiming the work of others as your own, is a serious

offence and can result in your exclusion from all colleges of the University of London. You should be aware that we use a range of automated tools to spot potential plagiarism in spreadsheets, databases, programme code and text documents. Providing you clearly reference work done by others that you have included in your FMA you will not be penalised.

In the course of completing the assignment, we acknowledge that you will research code from books and from online sources. *Ideas* and *techniques* from these sources may be used in the completion of your own work. HOWEVER, your own work MUST differ significantly from any third-party sources. If it does not, this will constitute plagiarism. You must also clearly reference any third-party sources you have used.

Likewise, we acknowledge that some students will work together collaboratively to solve problems. Again, if you do this, each student's final submission must be markedly different. If your work is not markedly different from another student's work, again, this will consitute plagiarism.