COMP327 Assignment 2 w/c 19th November 2018

Developing an "Artworks on Campus" App.

Your Task-

You will design and develop an application written in Swift 4.2 for iPhone 8 or similar. The application will enable you to locate artworks on campus within a set distance of the user's current location, or the location currently selected on a map.

In order to do this you will need to retrieve data from a web service regarding the location of, and information about, artwork on campus.

https://cgi.csc.liv.ac.uk/~phil/Teaching/COMP327/artworksOnCampus/data.php?class=artworks2&lastUpdate=2017-11-01

Note that images of the artworks, referenced in the JSON data are located at the following base URL:

https://cgi.csc.liv.ac.uk/~phil/Teaching/COMP327/artwork_images/

(Note: use secure URLs, otherwise your app will not load the data or images).

Your application is required to have the following basic features (worth 70%):

1. The user is initially presented with a map centred on their current location and at a reasonable level of zoom so that nearby roads etc. can be seen clearly. You may assume that the user is currently in the Ashton Building (a location file is available for Xcode to simulate the location of the Ashton Building). (latitude: 53.406566, longitude: -2.966531) (worth 10%)

2. The map contains a number of annotation marks indicating the location of nearby artworks. If a location (e.g. a building) has multiple artworks then these should be represented by a single annotation. (worth 5%)

3. In portrait view, a table below the map contains a list of artworks, grouped by building and ordered by distance from the current location. (worth 20%)

4. Tapping on an annotation displays an image and information either about a specific artwork, or else sensibly handles the fact that the annotation represents multiple artworks. One way to do the latter is to present a list of artworks available within the building, selecting any of which then displays an image and information about the selected artwork. Feel free to develop your own UI if you have an alternative that you think is better. (worth 15%)

Additional marks may be obtained by implementing useful features such as:

1. A search box allows the user to filter the items displayed in the table. (worth 5%)
2. Caching the artwork information (in Core Data) and images. (worth 10%)
3. Synchronising the app on startup, to check to see if new or modified data is available from the web service. (worth 5%)
4. Implement an alternative layout in landscape view e.g. the map should be displayed on the left and the table of items should be displayed on the right. (worth 5%)

Please ensure that your code is appropriately commented and meaningful class, variable and constant names are used (worth 5%).

If you use any third party frameworks or additional images or other materials, ensure that these are copied into the project – not just referenced somewhere else in your filestore. The zipped folder that you submit should be sufficient to compile and run your App. Make sure that the target iOS version is 12.0 or less so that your app will compile and run in the lab.

What to Submit

Your completed project should be zipped up and submitted via the online submission system.
(Right click the icon for the folder containing the project file and folder and choose “Compress”)
Also submit a short document (maximum of 1-2 sides of A4) documenting how to use your app and any notable features or limitations.

Deadline for submission: Friday December 14th at 5:00pm

Reminder: This is the second of two assignments, each of which is worth 15% of the total mark for COMP327. Your portfolio of lab work will be worth another 10%.