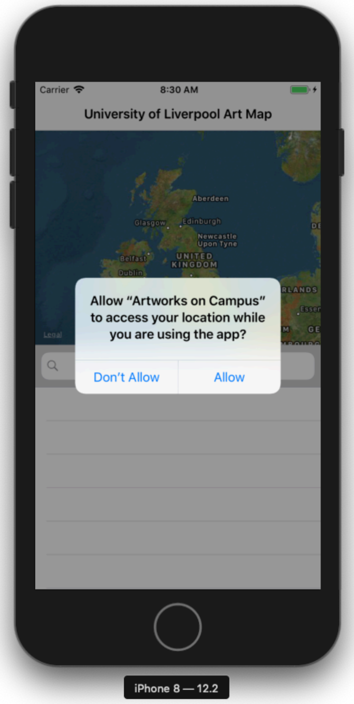
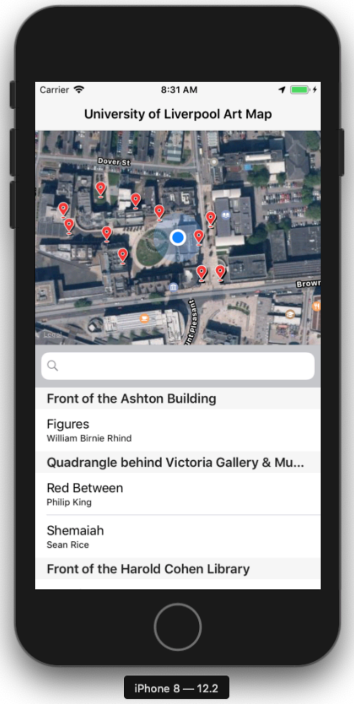
Features:

1. When users first time open the app, it will ask user to allow using location while they using the app. If user clicked allow, the app will turn to the main view, which contains a map, a search bar and a table(If contents does not load successfully, please re-run).

2. The user will be automatically located in the Aston Building in the simulator. The map contains some annotations, means that some artworks are located in there.



Allow "Artworks on Campus" to access your location while you are using the app?



Front of the Ashton Building

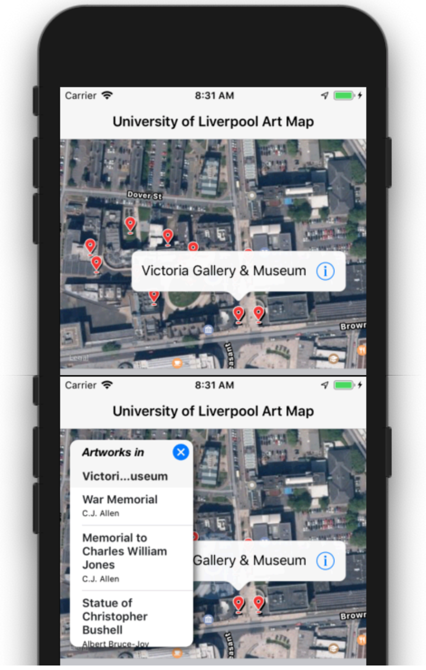
Figures
William Birnie Rhind

Quadrangle behind Victoria Gallery & Mu...

Red Between
Philip King

Shemaiah
Sean Rice

Front of the Harold Cohen Library



Carrier
8:31 AM
University of Liverpool Art Map
Dover St
Victoria Gallery & Museum
Brown
Carrier
8:31 AM
University of Liverpool Art Map
Artworks in
Gallery & Museum
Brown

Victori...useum

War Memorial
C.J. Allen

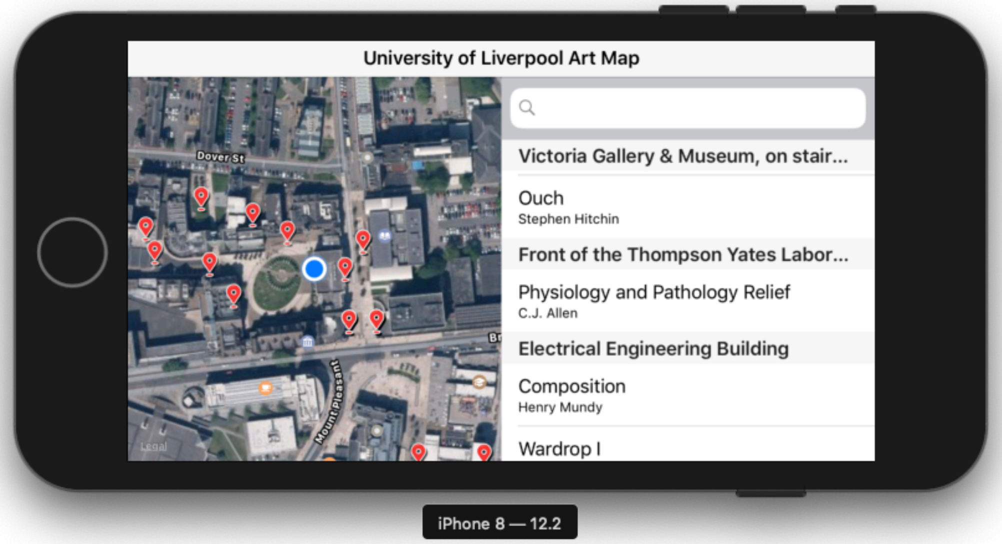
Memorial to Charles William Jones
C.J. Allen

Statue of Christopher Bushell
Albert Bruce-Joy

3. If the user click on the annotation on the map, it will call out a small window which contains the location's name and an information icon.

4. If the user click on the information icon, another table will pop up and shows artworks in the location.

5. If the user rotate his iPhone to left or right, an alternative layout is designed for landscape.



Victoria Gallery & Museum, on stair...

Ouch
Stephen Hitchin

Front of the Thompson Yates Labor...

Physiology and Pathology Relief
C.J. Allen

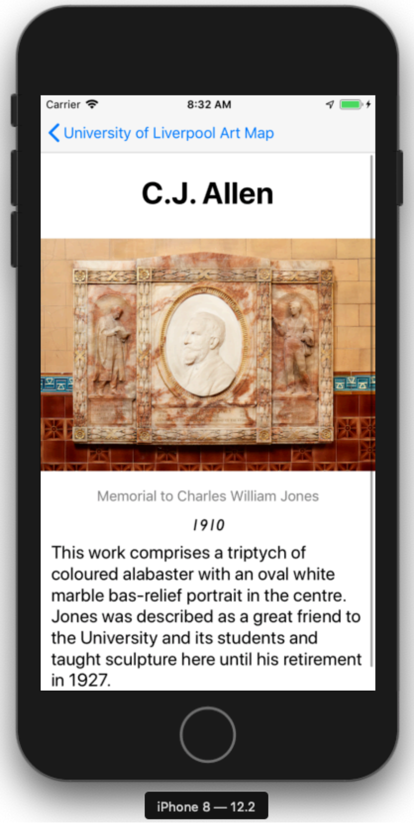
Electrical Engineering Building

Composition
Henry Mundy

Wardrop I

6. If the user clicks on the cells in the main table or the sub-table. It will turn to the second page, which contains the artist's name, an image of the artwork, location of the artwork, year of the artwork and the description of the art work.

7. Since CoreData is used, this app can still load informations after quit the app and disconnect from the internet.



Carrier 8:32 AM

University of Liverpool Art Map

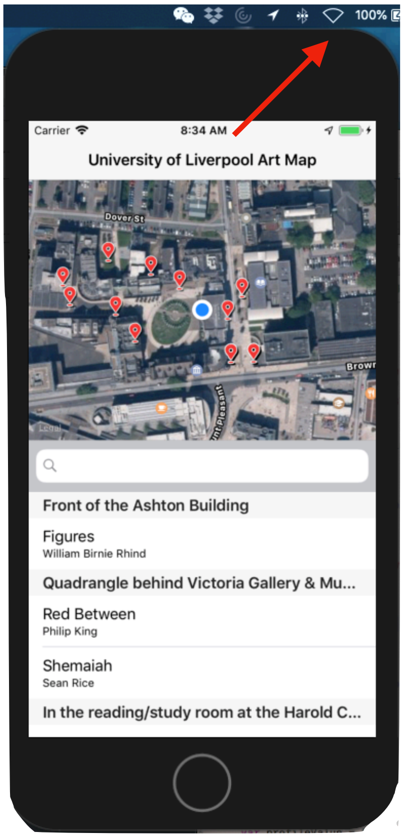
C.J. Allen

Memorial to Charles William Jones

1910

This work comprises a triptych of coloured alabaster with an oval white marble bas-relief portrait in the centre. Jones was described as a great friend to the University and its students and taught sculpture here until his retirement in 1927.

iPhone 8 — 12.2



Carrier 8:34 AM

University of Liverpool Art Map

Front of the Ashton Building

Figures
William Birnie Rhind

Quadrangle behind Victoria Gallery & Mu...

Red Between
Philip King

Shemaiah
Sean Rice

In the reading/study room at the Harold C...

Limitations:

1.Search function is written in the code but seems doesn't work

2.Can't synchronising the app on startup(checking to see if new or modified data is available from the web service.)

3.Although the picture is saved by NSCache, but I can't analyze whether it is saved by function below.

```
    let imageCache = NSCache<NSString, UIImage>()
    var UrlWithoutSpace = ""
    var imgURL = ""
    if let UrlWithSpace = jdata?.fileName{
        UrlWithoutSpace = UrlWithSpace.replacingOccurrences(of: " ", with: "%20")
        imgURL = "https://cgi.csc.liv.ac.uk/~phil/Teaching/COMP228/artwork_images/
\(String(describing: UrlWithoutSpace))"
    }
    if let imgurl = URL(string: imgURL){
        do{
            let imgdata = try Data(contentsOf: imgurl)
            let NSimgdata = NSString(string: imgURL)
            if let image = imageCache.object(forKey: NSimgdata){
                self P2Image image = image
            }else{
                let image = UIImage(data: imgdata)
                imageCache.setObject(image!, forKey: NSimgdata)
                self P2Image image = image
            }
        }catch let error{
            print "Error: \(error.localizedDescription)"
        }
    }
```

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