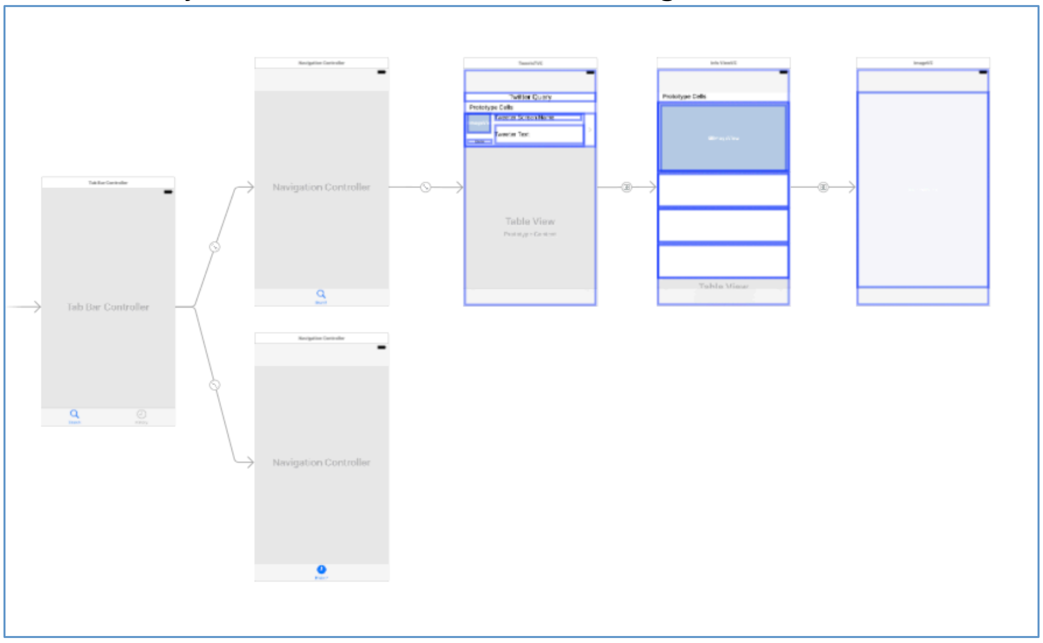
TweeterTags
COMP47390
James Dorrian
13369451

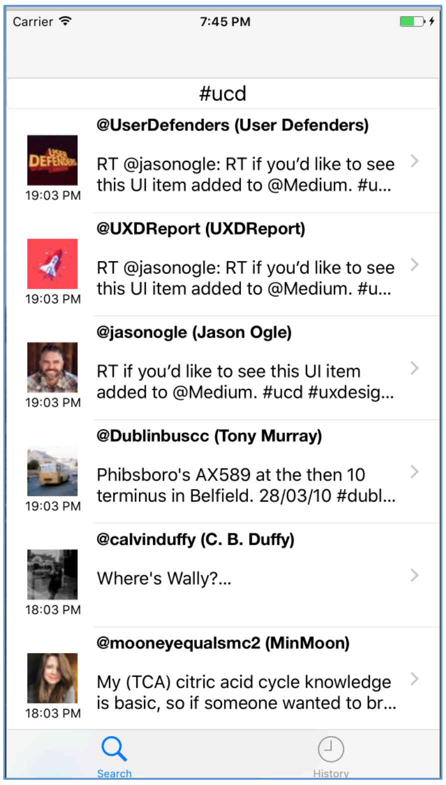
Part 1: ***Steps:***

1. Created single view application
2. Imported twitter api class
3. Removed viewcontroller and replaced with TweetsTVC
4. Added the twittertweet model to TweetsTVC to grant access to API
5. Edited storyboard to reflect tab view and navigation controllers



6. Embedded tableView to navigation controller
7. Implemented TweetsTVC to reflect '#ucd' as default parameter to the search field along with the refresh method to generate new tweets and to consider when twitterQueryText (formally '#ucd') is changed by the user. The title is set programmatically to the last search query.
8. Implemented default tableview methods including: numberOfRowsInSection, cellForRowsAt, numberOfSections. I also made sure that the text field in the storyboard was the delegate
9. In storyboard I configured the table cell to have 4 values: 3 labels and an image. A TweetCell class was created to set the text for tName, tText and tDate. Twitter profile image was set in the TweetsTVC.
10. Connected the textField in the storyboard to the TVC and implemented the textField should return method to dismiss the keyboard
11. I constrained the labels and image in such a way that they appear perfectly sized for all devices and orientations

This produced this for me:


Carrier 7:45 PM

#ucd

@UserDefenders (User Defenders)
RT @jasonogle: RT if you'd like to see this UI item added to @Medium. #u...
19:03 PM

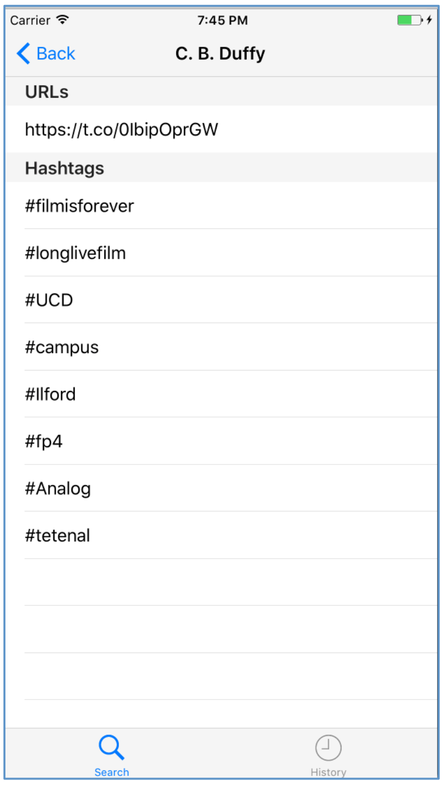
@UXDReport (UXDReport)
RT @jasonogle: RT if you'd like to see this UI item added to @Medium. #u...
19:03 PM

@jasonogle (Jason Ogle)
RT if you'd like to see this UI item added to @Medium. #ucd #uxdesig...
19:03 PM

@Dublinbuscc (Tony Murray)
Phibsboro's AX589 at the then 10 terminus in Belfield. 28/03/10 #dubl...
19:03 PM

@calvinduffy (C. B. Duffy)
Where's Wally?...
18:03 PM

@mooneyequalsmc2 (MinMoon)
My (TCA) citric acid cycle knowledge is basic, so if someone wanted to br...
18:03 PM


Carrier 7:45 PM

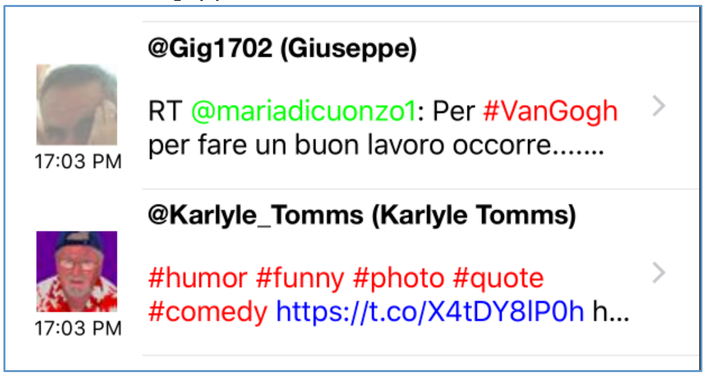
Back C. B. Duffy

URLs
https://t.co/0lbipOprGW

Hashtags
#filmisforever
#longlivefilm
#UCD
#campus
#Ilford
#fp4
#Analog
#tetenal

Part 2: *Steps:*

1. Changed the colour of the tText (twitter text) by using string attributes when an @, # or http:// are encountered.


@Gig1702 (Giuseppe)
RT @mariadicuonzo1: Per #VanGogh per fare un buon lavoro occorre.......
17:03 PM

@Karlyle_Tomms (Karlyle Tomms)
#humor #funny #photo #quote #comedy https://t.co/X4tDY8lP0h h...
17:03 PM

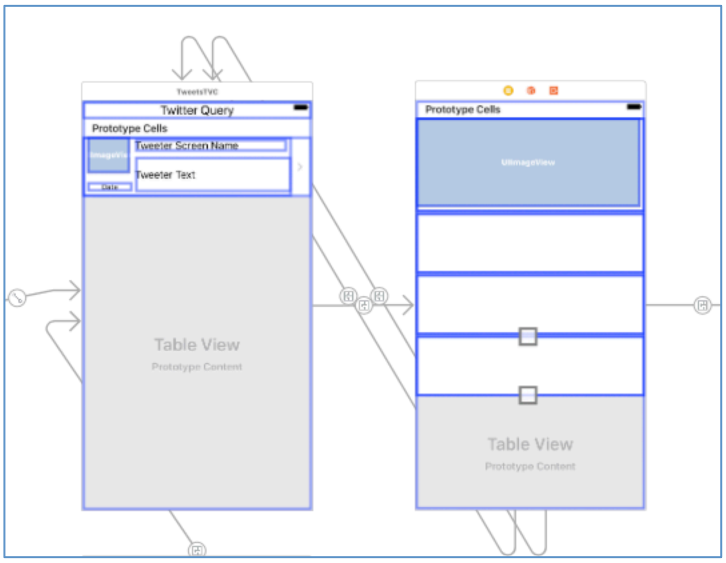
2. Integrated the segue from TweetsTVC to InfoViewVC which is where users can view the information contained in a tweet in detail.
3. Originally here I used a single cell to display the images,hashtags,urls and mentions but that caused me some difficulty. One such problem was that the segue which displayed the image could be clicked even when there was no image as the cell connecting the segue still existed. After messing around with the prepare segue for quite a while I decided it was better to have individual cells for classification of tweet element. This also allowed me to hide the table heading much more easily.
4. I decided that the most convenient way to decide which segue to follow depending on the table cell clicked was to have type checks in the prepare method. If the cell was a hashtag/mention -> TweetsTVC and if it was an image -> imageVC

```swift
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if (sender as? infoCell) != nil {
        if segue.identifier == "showPicture"{
            if let destination =  segue.destination as? ImageVC{
                if self.tableView.indexPathForSelectedRow != nil{
                    destination.title = tweet?.user.screenName
                    destination.imageURL = (tweet?.media[0].url)!
                }
            }
        }
    } else if let mediaCall = sender as? hashCell {
        if segue.identifier == "toTweetsTVC"{
            if let destination =  segue.destination as? TweetsTVC{
                if self.tableView.indexPathForSelectedRow != nil{
                    destination.twitterQueryText = (mediaCall.textLabel?.text)!
                }
        }
    }
    } else if let mediaCall = sender as? mentionCell {
        if segue.identifier == "toTweetsTVC"{
            if let destination =  segue.destination as? TweetsTVC{
                if self.tableView.indexPathForSelectedRow != nil{
                    destination.twitterQueryText = (mediaCall.textLabel?.text)!
                }
            }
        }
    }
}
```

Finally if it was a http:// request open safari using didSelectRow at method:

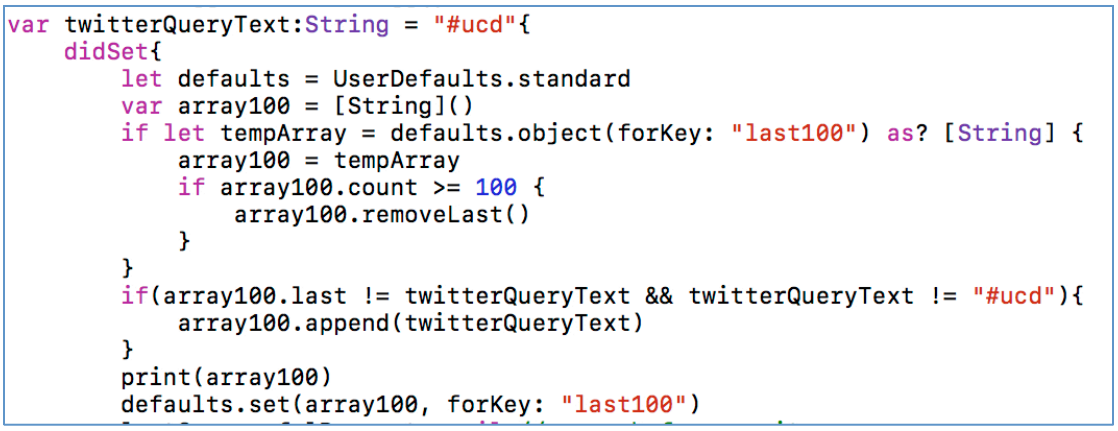
```swift
override func tableView(_ tableView: UITableView, didSelectRowAt indexPath: IndexPath) {
    if(indexPath.section == 1){
        if let url = URL(string: (tweet?.urls[indexPath.row].keyword)!) {
            UIApplication.shared.openURL(url as URL)
        }
    }
}
```

5. Now that I can directly control which cell is clicked and what to do with it I configured the open URL ability when a URL is clicked and the ability to follow a '#value' and an '@value' back to tweets TVC



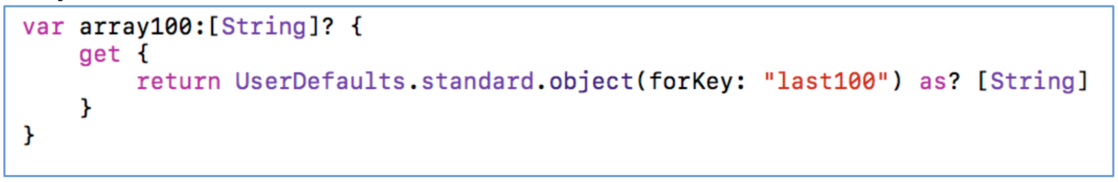
6. Now we see the true value of the navigation controllers as we can traverse our movements back to the very beginning.
7. I found it impossible to correctly configure the zoom for the scrollview, I tried many different methods involving viewDidLayoutSubviews and tried to follow several online tutorials but in the end I couln't work it out and due to time constraints I was forced to move on.

8. Adding persistence was very straightforward thanks to userdefaults. In Tweets TVC I checked if the persistent storage last100 existed, if it did I added on the user's newest search and if it didn't I created one. When accessing this list I simply read values from the array and added them to a table view controller. If one of the history cells were clicked in segued back to the TweetsTVC exactly how the mentions and hashtags work in the InfoViewVC. I do a basic check to make sure an item isn't added twice in a row and that #ucd is never added as it is the default



```
var twitterQueryText:String = "#ucd"{
    didSet{
        let defaults = UserDefaults.standard
        var array100 = [String]()
        if let tempArray = defaults.object(forKey: "last100") as? [String] {
            array100 = tempArray
            if array100.count >= 100 {
                array100.removeLast()
            }
        }
        if(array100.last != twitterQueryText && twitterQueryText != "#ucd"){
            array100.append(twitterQueryText)
        }
        print(array100)
        defaults.set(array100, forKey: "last100")
```

To access the userdefaults in the HistoryTVC I split it into a string called array100 as follows:

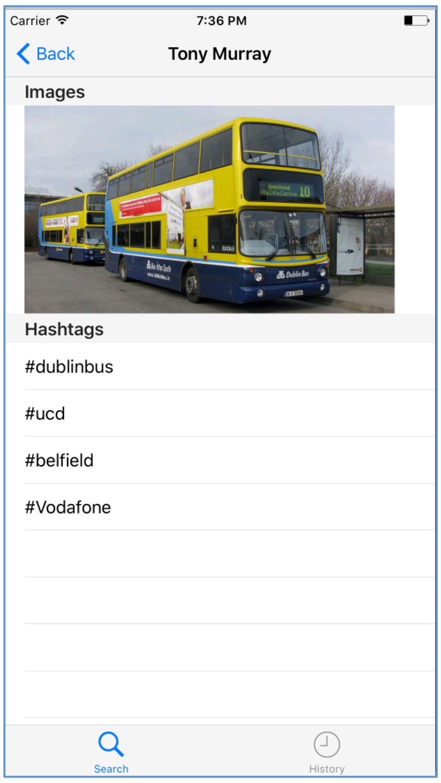


```
var array100:[String]? {
    get {
        return UserDefaults.standard.object(forKey: "last100") as? [String]
    }
}
```

9. It now occurs to me that downloading the image twice (in InfoViewVC and in ImageVC) is probably more time complex than is necessary but due to time constraints I must move on. If I were doing the app again I think that I would start with the storyboard layout because that took me quite a while to understand, I would also try and improve my scrollview implementation (imageVC).

<u>In summary:</u> I completed the application full except for my trouble with the image zoom which I plan to fix at a later date.

Some screenshots of the app in motion:



Carrier 7:36 PM

Back Tony Murray

Images

Hashtags

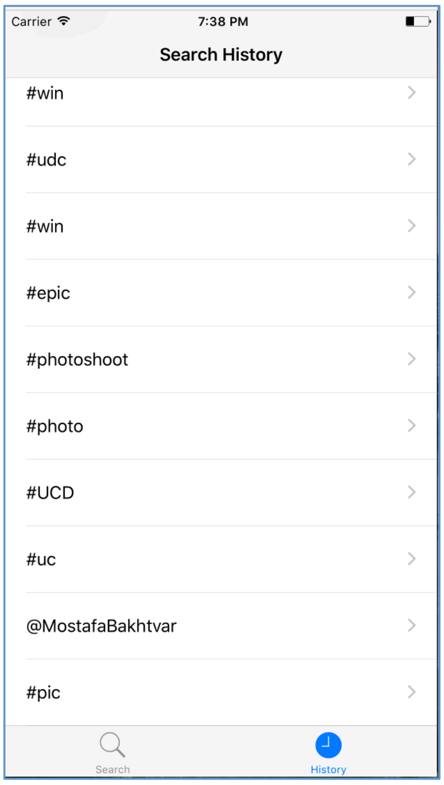
#dublinbus

#ucd

#belfield

#Vodafone

Search History



Carrier 7:38 PM

Search History

#win

#udc

#win

#epic

#photoshoot

#photo

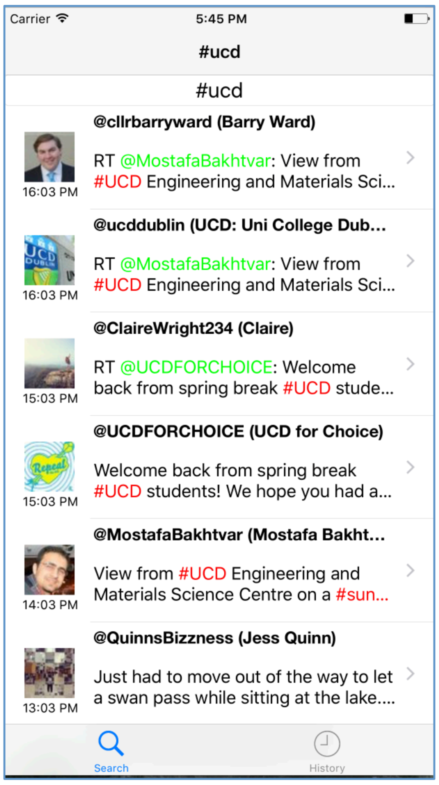
#UCD

#uc

@MostafaBakhtvar

#pic

Search History



Carrier 5:45 PM

#ucd

#ucd

@cllrbarryward (Barry Ward)
16:03 PM
RT @MostafaBakhtvar: View from #UCD Engineering and Materials Sci...

@ucddublin (UCD: Uni College Dub...
16:03 PM
RT @MostafaBakhtvar: View from #UCD Engineering and Materials Sci...

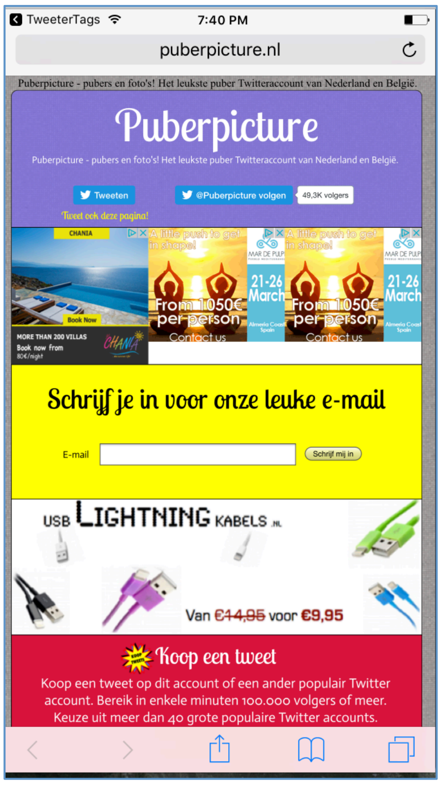
@ClaireWright234 (Claire)
15:03 PM
RT @UCDFORCHOICE: Welcome back from spring break #UCD stude...

@UCDFORCHOICE (UCD for Choice)
15:03 PM
Welcome back from spring break #UCD students! We hope you had a...

@MostafaBakhtvar (Mostafa Bakht...
14:03 PM
View from #UCD Engineering and Materials Science Centre on a #sun...

@QuinnsBizzness (Jess Quinn)
13:03 PM
Just had to move out of the way to let a swan pass while sitting at the lake....

Search History



TweeterTags 7:40 PM

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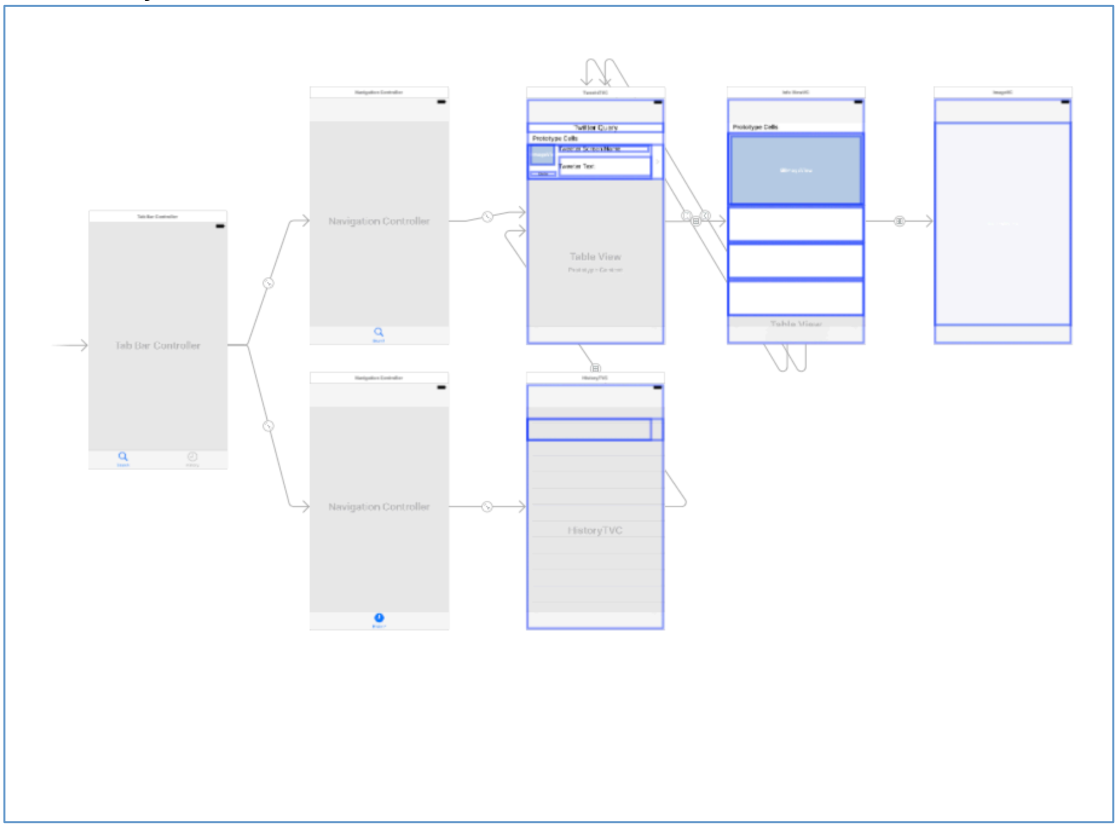
Koop een tweet

Koop een tweet op dit account of een ander populair Twitter account. Bereik in enkele minuten 100.000 volgers of meer. Keuze uit meer dan 40 grote populaire Twitter accounts.

Final storyboard:


Tab Bar Controller
Navigation Controller
Navigation Controller
Twitter Query
Prototype Cells
Tweeter Text
Table View
Prototype Content
Prototype Cells
Table View
HistoryTVC