

Programming Assignment 2

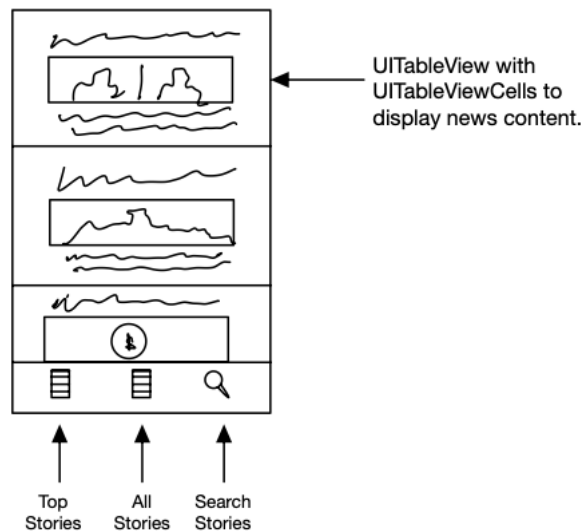
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Main View Controller:



Software Design:

For the software design of my application, I took a very simple approach. My design consists of 3 view controllers that make API calls to different endpoints using the NewsAPI (<https://newsapi.org/docs>). The API's are called using the NewsHeadlinesAPI class and initializing it with the endpoint needed to access the specified news feed. The API endpoints called are used to populate the Top Stories, All Stories, and Search Stories TableViewCells. The View Controllers are essentially table views and cells, minus the search tab which implements search functionality that displays whatever the user searches for. I also implemented pull down to refresh for the Top stories section that will refresh stories when pulled down.

Cyclic References:

```
override func viewDidLoad() {
    super.viewDidLoad()
    view.backgroundColor = UIColor.systemBackground
    allStoriesTableView.delegate = self
    allStoriesTableView.dataSource = self
    refreshControl.addTarget(self, action: #selector(refreshData), for: .valueChanged)
    allStoriesTableView.refreshControl = refreshControl
    stories.Headlines { [weak self] result in
        switch result {
        case .success(let articles):
            DispatchQueue.main.async {
                self?.allStories = articles
                self?.allStoriesTableView.reloadData()
            }
        case .failure(let error):
            print("Error fetching all headlines: \(error)")
        }
    }
}
```

When designing my application, I took great care in the design to avoid cyclic references. In the viewDidLoad function and the RefreshData function I utilized “weak self” to prevent a strong reference cycle between the ViewControllers and the closure.