

EE 443 / EE 593

Mobile Application Development

Ivan White

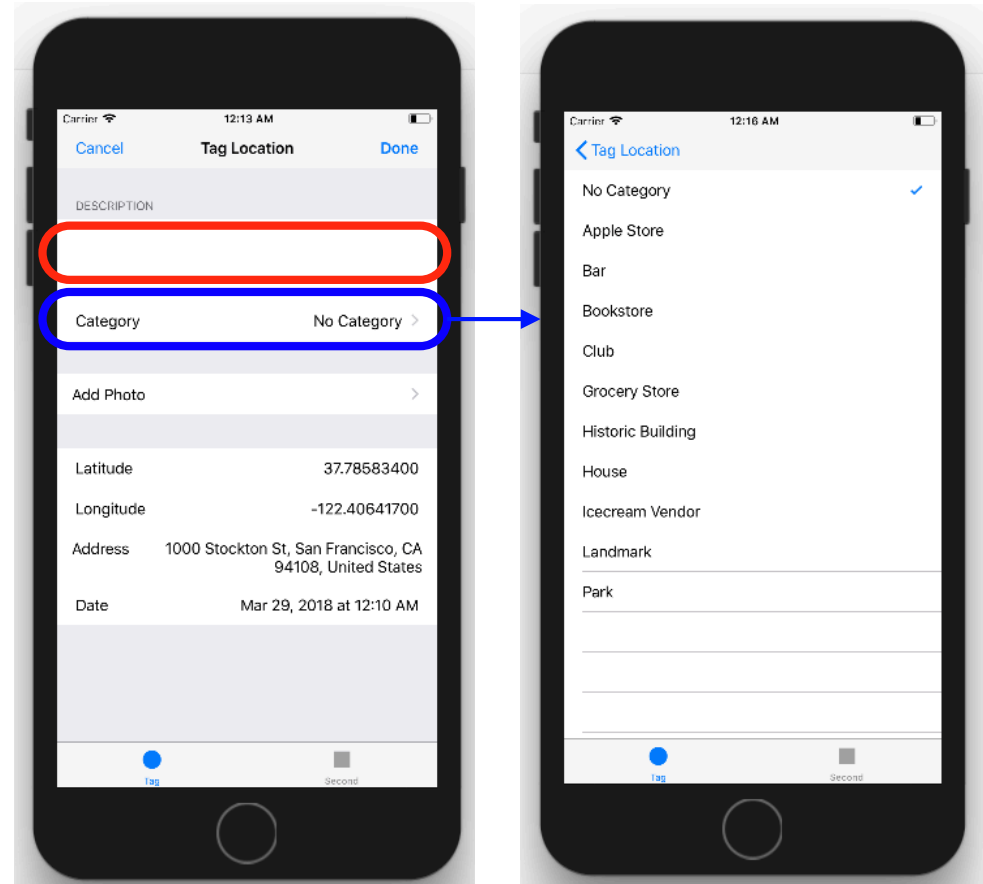
Lecture 18

**Chapter 25:
The Tag Location Screen**

Ivan White

The Screen

- **Tag Location** opens a `TableViewController` with static cells
- **Description** cell contains a `UITextView`
 - Like `UITextField`, but for multiple lines
- **Category** cell opens a new screen for picking a category from a list



The New View Controller

- New File: **LocationDetailsViewController.swift**

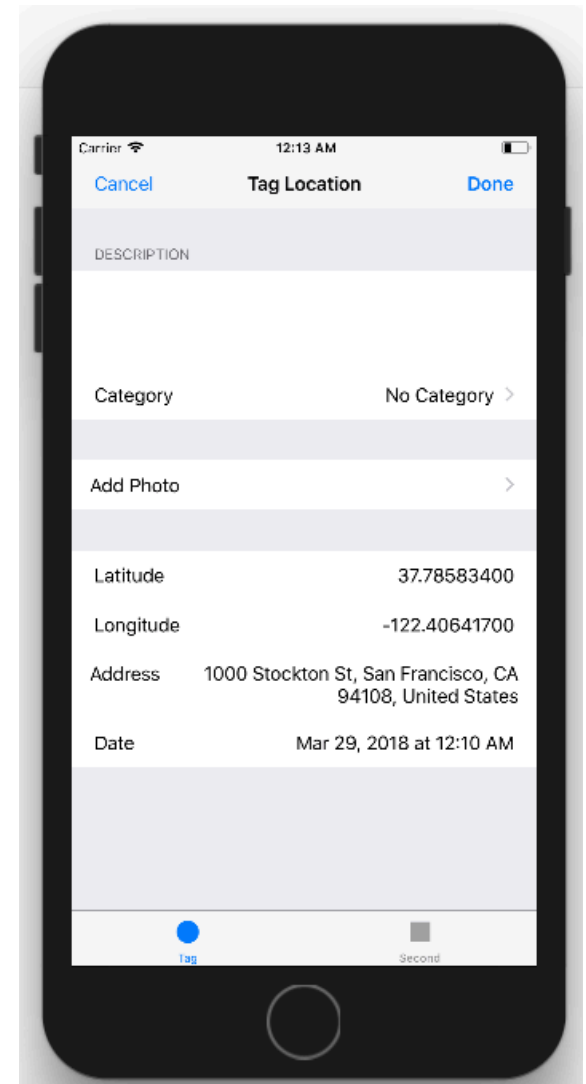
```
import UIKit

class LocationDetailsViewController: UITableViewController {
    @IBOutlet weak var descriptionTextView: UITextView!
    @IBOutlet weak var categoryLabel: UILabel!
    @IBOutlet weak var latitudeLabel: UILabel!
    @IBOutlet weak var longitudeLabel: UILabel!
    @IBOutlet weak var addressLabel: UILabel!
    @IBOutlet weak var dateLabel: UILabel!

    // MARK:- Actions
    @IBAction func done() {
        navigationController?.popViewController(animated: true)
    }

    @IBAction func cancel() {
        navigationController?.popViewController(animated: true)
    }
}
```

- Embed Current Location View Controller in Navigation Controller



Navigation bar hiding

- In *CurrentLocationViewController.swift*,

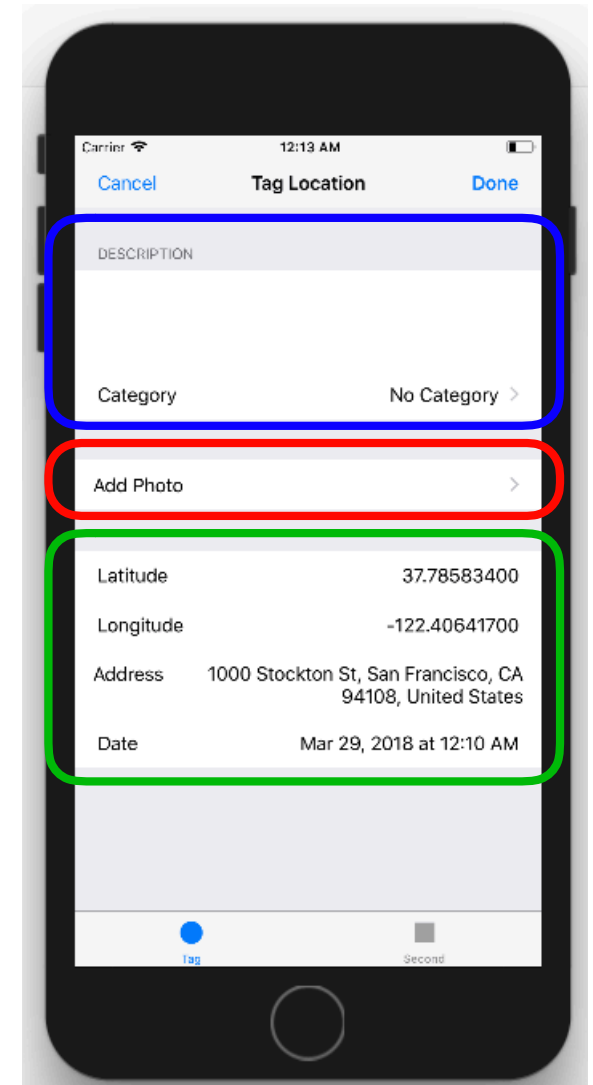
```
override func viewWillAppear(_ animated: Bool) {  
    super.viewWillAppear(animated)  
    navigationController?.isNavigationBarHidden = true  
}
```

```
override func viewWillDisappear(_ animated: Bool) {  
    super.viewWillAppear(animated)  
    navigationController?.isNavigationBarHidden = false  
}
```

- affects all views displayed by navigation controller

Make the cells

- Three sections in the table view:
 1. Description text view and category
 2. Add Photo
 3. Latitude/Longitude, address, and date rows (read-only)



Display location info

- In *LocationDetailsViewController.swift*,

```
var coordinate = CLLocationCoordinate2D(latitude: 0, longitude: 0)
var placemark: CLPlacemark?
```

- *CLLocationCoordinate2D* and *CLPlacemark* are part of the Core Location framework, so...

```
import CoreLocation
```

Pass data to the details view

- Do this via the segue from *CurrentLocationViewController*

```
// MARK:- Navigation
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if segue.identifier == "TagLocation" {
        let controller = segue.destination as!
LocationDetailsViewController
        controller.coordinate = location!.coordinate
        controller.placemark = placemark
    }
}
```

Display information on the Tag Location screen

- In *LocationDetailsViewController.swift*,

```
override func viewDidLoad() {
    super.viewDidLoad()

    descriptionTextView.text = ""
    categoryLabel.text = ""

    latitudeLabel.text = String(format: "%.8f", coordinate.latitude)
    longitudeLabel.text = String(format: "%.8f", coordinate.longitude)

    if let placemark = placemark {
        addressLabel.text = string(from: placemark)
    } else {
        addressLabel.text = "No Address Found"
    }

    dateLabel.text = format(date: Date())
}
```

The string() helper method

```
// MARK:- Private Methods
func string(from placemark: CLPlacemark) -> String {
    var text = ""

    if let s = placemark.subThoroughfare {
        text += s + " "
    }
    if let s = placemark.thoroughfare {
        text += s + ", "
    }
    if let s = placemark.locality {
        text += s + ", "
    }
    if let s = placemark.administrativeArea {
        text += s + " "
    }
    if let s = placemark.postalCode {
        text += s + ", "
    }
    if let s = placemark.country {
        text += s
    }
    return text
}
```

Date Formatting

- Make it a private global constant

```
private let dateFormatter: DateFormatter = {  
    let formatter = DateFormatter()  
    formatter.dateStyle = .medium  
    formatter.timeStyle = .short  
    return formatter  
}()
```

The format() helper method

```
func format(date: Date) -> String {  
    return dateFormatter.string(from: date)  
}
```

Multi-line address display

```
// MARK:- Table View Delegates
override func tableView(_ tableView: UITableView, heightForRowAt
indexPath: IndexPath) -> CGFloat {
    if indexPath.section == 0 && indexPath.row == 0 {
        return 88

    } else if indexPath.section == 2 && indexPath.row == 2 {
        addressLabel.frame.size = CGSize(width: view.bounds.size.width -
120, height: 10000)
        addressLabel.sizeToFit()
        addressLabel.frame.origin.x = view.bounds.size.width -
addressLabel.frame.size.width - 16
        return addressLabel.frame.size.height + 20
    } else {
        return 44
    }
}
```

The category picker

- New file: **CategoryPickerViewController.swift**,

```
import UIKit

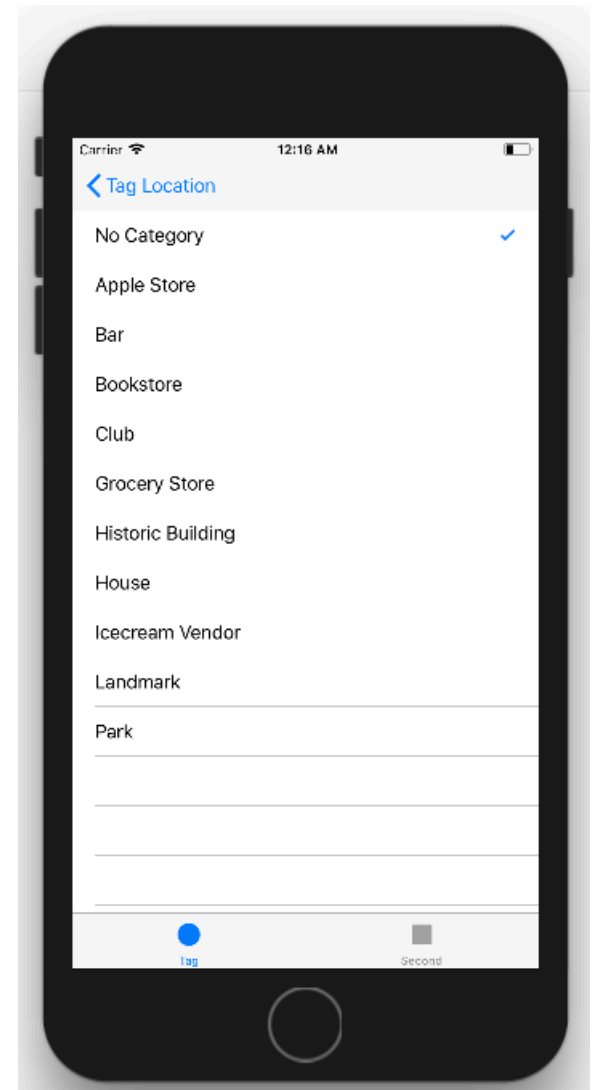
class CategoryPickerViewController: UITableViewController {
    var selectedCategoryName = ""

    let categories = [
        "No Category",
        "Apple Store",
        "Bar",
        "Bookstore",
        "Club",
        "Grocery Store",
        "Historic Building",
        "House",
        "Icecream Vendor",
        "Landmark",
        "Park"]

    var selectedIndexPath = IndexPath()

    override func viewDidLoad() {
        super.viewDidLoad()

        for i in 0..
```



```

// MARK:- Table View Delegates
override func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) ->
Int {
    return categories.count
}

override func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) ->
UITableViewCell {
    let cell = tableView.dequeueReusableCell(withIdentifier: "Cell", for: indexPath)

    let categoryName = categories[indexPath.row]
    cell.textLabel!.text = categoryName

    if categoryName == selectedCategoryName {
        cell.accessoryType = .checkmark
    } else {
        cell.accessoryType = .none
    }
    return cell
}

override func tableView(_ tableView: UITableView, didSelectRowAt indexPath: IndexPath) {
    if indexPath.row != selectedIndexPath.row {
        if let newCell = tableView.cellForRow(at: indexPath) {
            newCell.accessoryType = .checkmark
        }
        if let oldCell = tableView.cellForRow(
            at: selectedIndexPath) {
            oldCell.accessoryType = .none
        }
        selectedIndexPath = indexPath
    }
}
}

```

The segue

- In *LocationDetailsViewController.swift*,

```
var categoryName = "No Category"

override func viewDidLoad() {
    . . .
    categoryLabel.text = categoryName
    . . .
}

// MARK:- Navigation
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if segue.identifier == "PickCategory" {
        let controller = segue.destination as!
CategoryPickerViewController
        controller.selectedCategoryName = categoryName
    }
}
```

The unwind segue

- In *LocationDetailsViewController.swift*,

```
@IBAction func categoryPickerDidPickCategory(_ segue:
UIStoryboardSegue) {
    let controller = segue.source as! CategoryPickerViewController
    categoryName = controller.selectedCategoryName
    categoryLabel.text = categoryName
}
```

- In *CategoryPickerViewController.swift*,

```
// MARK:- Navigation
override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    if segue.identifier == "PickedCategory" {
        let cell = sender as! UITableViewCell
        if let indexPath = tableView.indexPath(for: cell) {
            selectedCategoryName = categories[indexPath.row]
        }
    }
}
```