

# Final Project (Swift Bootcamp)

## IOS Application

### Overview

For your final project, you'll have the choice of building an iOS application. Use your imagination! You get to create whatever you want for this app.

Though, you'll need to run your user stories, wireframes, and database design by your instructors to get their feedback and approval before you begin coding!

You will be working as an individual for this project.

### What You've Learned

By the time you submit this project, you will have covered new ground in, and reviewed, many of the big themes of the course so far:

- Command-line Interface: Practice interacting with the computer and navigating the filesystem from the command line.
- Using Git for Source Control: Manage and interact with a git repository to store changes to code.
- The Swift Language.
- Understanding Agile Methodologies.
- Views and the View Hierarchy.
- View Controllers.
- Programmatic Views.
- Text Input and Delegation.
- Internationalization and Localization.
- Debugging.
- UITableView and UITableViewController.
- Subclassing UITableViewCell.
- Stack Views.
- Navigation Controllers.
- Saving, Loading, and Scene States.
- Actions, Menus, and Memory Management.
- Presenting View Controllers.
- Images and Caching.
- Adaptive Interfaces.
- Extensions and Container View Controllers.
- Custom Controls.
- Controlling Animations.
- Web Services.
- Collection Views.
- Introduction to Core Data.
- Core Data Relationships.
- Accessibility

## Prerequisite

- Select a Project Idea of your own.
- User stories.
- Wireframe.
- Entity Relationship Diagram (ERD).

## Requirements:

- Build an iOS application from scratch
- Use the MVC design pattern
- Support dark/light modes
- Use UIKit Framework, construct and manage a graphical, events-driven user interface for your iOS app
- Use TableView and/or Collection View
- Have a Tab bar or a Navigation bar
- Use layout-Auto with storyboard or programmatically
- Have at least one gesture recognizer
- Connect to back-end (Firebase, mongoDB, or any database resource), and have full CRUD
- Have at least 2 models (more if it makes sense)
- Add authentication for Users
- Craft a README.md file that explains your app

## Additional Requirements & Bonus:

- Authorization roles and groups
- Use CoreData Framework
- High quality, professional design
- Internationalization & Localization (e.g. Arabic/English language)
- Location
- Speech recognition
- Deployment on App Store

## Necessary Deliverables:

- Submissions will be submitted by posting into slack
- A link to your GitHub repository
- A link of your presentation

The presentation must be a **8-10 minutes** presentation in which you answer the following questions:

- What is the application about?
- What are the user stories for your application?
- What API did you choose to use?

- Demo of the application
- Walk through a piece of code
- What was the most difficult part of the project?
- What was your favorite part of the project?

## Useful Resources

- <https://developer.apple.com/documentation>
- <https://app.diagrams.net>