

Key Technical Decisions:

1 UIKit with Storyboards

- Chose Storyboards for faster UI prototyping and visual layout management.
- Maintained programmatic elements where needed (e.g., dynamic table cells).

2 UserDefaults for Storage

- Selected for simplicity and zero setup—ideal for small-scale task data.
- Used `Codable` to serialize/deserialize `Task` objects seamlessly.

3 MVC Architecture

- Kept Storyboard-friendly while separating:
 - **Model:** `Task` struct + `TaskManager` (data handling).
 - **View:** Storyboard scenes + programmatic cell tweaks.
 - **Controller:** Mediates logic (e.g., swipe-to-delete animations).

4 Hybrid Approach

- Mixed Storyboard segues (`Show/Present Modally`) with programmatic navigation where dynamic behavior was needed (e.g., filter transitions).

Challenges Faced:

1 Storyboard Limitations

- Dynamic cell animations (e.g., delete effects) required programmatic overrides in `TaskTableViewCell`.
- **Fix:** Used `UITableView`'s `commitEditingStyle` with `UIView.animate`.

2 UserDefaults Scalability

- Large task lists slowed down read/write operations.
- **Mitigation:** Cached tasks in memory and

updated `UserDefaults` only on changes.

3 State Sync Across Screens

- Changes in `AddEditTaskViewController` didn't immediately reflect in the main list.
- **Fix:** Used unwind segues + `viewWillAppear` to reload data.

4 Date Picker in Storyboard

- Toggling visibility caused layout issues.
- **Fix:** Constrained picker to a container view and animated `isHidden` with `layoutIfNeeded()`.