

Mobile App Offline Mode Specification Sample

1. Overview

This document specifies the requirements and behavior for offline mode in the mobile app. Offline mode allows users to continue using the app's core features without an active internet connection.

2. Offline Capabilities

- Access to previously synced content
- Perform core actions (e.g., view, create, edit items)
- Queue outgoing requests for later synchronization

3. Data Storage

- Use local device storage (e.g., SQLite, IndexedDB) for offline data
- Store pending requests in a queue
- Encrypt sensitive data on device storage

4. Synchronization

1. Detect when a network connection is re-established
2. Auto-sync queued requests in the order created
3. Resolve conflicts (see section 6)
4. Provide visual feedback on sync status

5. User Interface

- Offline indicator visible at all times when offline
- Display sync status (e.g., last synced, pending changes)
- Warn users when attempting unsupported actions in offline mode

6. Conflict Resolution

- If the same item was updated in both local and remote, present user with a merge/conflict UI
- For system-owned content, apply "last write wins" strategy

7. Error Handling

- Show user-friendly error messages when actions can't complete offline
- Retry sync automatically on next connectivity

8. Security

- Encrypt sensitive data stored locally
- Clear local storage upon user logout

9. Specifications Table

Feature	Supported Offline	Behavior
View Content	Yes	Shows last-synced data
Create Item	Yes	Queued until online
Edit Item	Yes	Queued, may require conflict resolution
Delete Item	Yes	Queued until online
Upload Media	No	Display warning, queue option if enabled

10. Future Improvements

- Partial sync/backoff strategies
- Manual sync control for power users
- Granular offline settings