

# iOS Developer Home Assignment – Bluetooth Interaction

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## Objective

Build an iOS app that discovers nearby Bluetooth (BT) / Bluetooth Low Energy (BLE) devices, displays them in an auto-refreshing list, and allows the user to select one and initiate a simple interaction (e.g., send a message or file).

## Requirements

### Core Features

#### 1. Device Discovery:

- Use **CoreBluetooth** to scan for nearby BT / BLE devices.
- Auto-refresh the list in real time (or near real time).
- Show device name, UUID, RSSI (signal strength), and optional manufacturer data.

#### 2. Device Selection:

- Tap a device to establish a connection (if possible).
- After connection, show a simple interaction UI.

#### 3. Data Transmission:

- Implement one of the following (your choice):
  - Send a short **text message** (e.g., "Hello from iPhone").
  - Send a small **file** (e.g., image or text).
  - Trigger a **command** (e.g., toggle LED, if connecting to custom macOS app or Raspberry Pi).

#### 4. Peer Device:

- Assume the other side is a **macOS app or iPhone** that you also control.
- Provide a minimal implementation for the peer device (just enough to show communication works).

### UX/UI

- Clean, minimal UI.
- Show device list with live updates.
- Indicate connection status and feedback on data transfer.

## Time Expectation

~4-6 hours of focused work. Depth and polish are appreciated, but clean, working code is the priority.

## Submission

- GitHub repo (or zip) with:
  - Xcode project.
  - Short README explaining:
    - Approach.
    - Known limitations.
    - Instructions to run both iOS and peer (if needed).