Faculty Locations with MapKit

This week, your task is to create an iOS application that displays a map using the MapKit framework (a native framework in the iOS SDK). Design the app layout according to your preferences.

The app, "AU Map," will consist of two screens, navigable via a TabBar. One screen will display a map view with pinned locations, while the other will show a list of these locations in a TableView.

For the first screen, the app should load with the current location set to latitude 13.612320 and longitude 100.836808, which corresponds to the ABAC Center. When zoomed out, the map will display 10 surrounding pins within the campus area. You can obtain information about these locations by parsing a provided JSON file, abac_location.json. When a user taps on a surrounding pin, the pin's view should display the faculty's name as the title and its abbreviation as the subtitle. Additionally, you need to implement a detail button in the pin's callout. When the user taps this button, an AlertView should appear, showing the faculty's name as the title and the coordinates (latitude, longitude) as the subtitle.

For the second screen, "AU Map" will display a list of faculties, also read from the JSON file. Each cell in the list will include the faculty's logo, name, and distance from the current location (latitude, longitude). You will need to calculate the distance between the faculty's location and the current location, using a formula you find online.

Note: After parsing the JSON file abac_location.json, store each faculty's information in an AUPlace object. The AUPlace class should contain the following properties: facultyName (String), abbreviation (String), imageLogoName (String), latitude (double), and longitude (double).

Your Tasks

- o   Display the current location at ABAC Center on the map using MapKit.
- o   Load place data from the JSON file into an AUPlace array.
- o   Display all 10 faculty pins on the map.
- o   Show the pin's callout view.
- o   Display an AlertView when the callout detail button is clicked.
- o   Display a list of faculties in a TableView.
- o   Calculate and display the distance value.

Get extra 0.5 score toward the practical midterm score for each complete task.