Geofence: Case Study

Background

Cohesion clients see value in understanding space and occupancy utilization of commercial buildings. The research shows that cohesion can leverage its mobile app to get anonymized building occupancy data. We can use access control integration with geofence triggers to better understand the entry/exist patterns of our users.

The candidate is asked to develop a sample app using the geofencing feature to achieve the goal.

Rules of the game

1. The candidate is expected to spend no more than **4 hours** on this exercise.
2. We will review and discuss the submitted solution during an on-site technical deep-dive interview with the candidate
3. The candidate is allowed (and encouraged) to ask clarifying questions before they start the challenge.
4. The candidate can use in-memory list, in-memory database, file-as-a-database to mimic fake API call
5. The candidate is encouraged to commit their code as frequently as possible to showcase their thought process in code.
6. The candidate does not have to complete all requirements to submit their code-challenge if they run out of time. Our team will review the un-finished code without any penalties.

Current Requirements

- Create an iOS app using coreLocation and coreData framework
- Send data to API when user enter and exit the geofence
- Create minimal UI (if needed) to ask users to enable location for the app.
- Add test and setup document with the submission for our team to review (i.e., simulate location)
- **Bonus**: Integrate with Crashlytics / Google tag manager to understand user's app usage

Evaluation criteria

- Understanding of problem
- Use of Software fundamentals in the solution
  - Clean code (i.e., separation of concerns, readable and easy to maintain)
  - Tests (i.e., Unit test)
- Ability to use the same module in other features for indoor navigation in future

Instructions to submit code repository

Option 1

1. Please create a `GitHub`/`BitBucket` repository and commit your code there.
2. Send link to the repository and allow read access (if private)

Options 2

1. Compress your code in `.zip` file

2. Send zip file with instructions to setup code

Best of luck!

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