

Internship Assignment: Sales and CRM Analytics System

Objective

This assignment is intended to assess your **problem-solving skills, system design thinking, and implementation approach**.

The evaluation will be based primarily on the **effort you put in, clarity of thought, and logical reasoning**, rather than on a fully polished or production-ready solution.

You will have **24 hours** to complete this assignment.

Problem Statement

Design a **cross-platform, location-aware Sales and CRM Analytics system** for a real-estate company.

The system should operate on:

- Android
- iOS
- Web

The solution should help the organization:

- Track sales employee location within defined geo-fenced areas
 - Monitor sales activities such as leads, visits, meetings, and bookings
 - Analyze performance at both site and employee levels
 - Enable data-driven business decisions
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Scope of the Assignment

1. User and Role Management

Roles:

- Admin
- Sales Manager
- Sales Executive

Key features:

- User authentication and login
 - Role-based access control
 - Employee profiles with assigned site and working area
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2. Location Tracking and Geo-Fencing

Requirements:

- Live or periodic location tracking of sales employees
- Validation of employee presence within a predefined circular geo-fence

Process:

- Admin defines site latitude, longitude, and allowed radius
- The system checks whether the employee is within the permitted area
- Entry and exit times are logged automatically

Use cases:

- Verification of on-site presence
 - Validation of client visit authenticity
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3. Lead Management (CRM Core)

Each lead should include:

- Client name
- Phone number and/or email
- Lead source (Walk-in, Campaign, Referral)
- Assigned sales executive
- Interested site
- Lead status (New, Visit Done, Follow-up, Booked, Lost)

Workflows:

- Sales executives create leads during on-site visits
 - Managers can reassign leads
 - All status updates must be timestamped
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4. Site and Visit Tracking

For each site:

- Total leads generated
- Number of site visits
- Meetings conducted
- Bookings completed
- Revenue generated

For each visit:

- Client details
- Assigned executive
- Date and time

- Location verification status
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5. Employee Performance Analytics

Key performance indicators:

- Leads generated
- Visits handled
- Conversion rate
- Bookings closed
- Average response time
- Time spent on site

Dashboards should support:

- Employee-wise analysis
 - Site-wise analysis
 - Time-based views (daily, weekly, monthly)
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6. Business Intelligence (Optional – Bonus)

Advanced insights may include:

- Best-performing sites
- Best-performing executives
- Funnel drop-off analysis (lead to booking)
- Peak visit times
- Campaign effectiveness

Conceptual ideas such as predictive analytics or AI-based lead scoring may be included as enhancements.

Suggested Data Models (Reference Only)

You may extend or modify these as required.

User

- id
- name
- role
- assigned_site_id

Site

- id
- name
- latitude
- longitude
- radius

Lead

- id
- client_name
- phone
- status
- site_id
- executive_id

Visit

- id
- lead_id
- checkin_time
- checkout_time
- location_verified

Booking

- id
 - lead_id
 - site_id
 - amount
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Technology Stack (Suggested, Not Mandatory)

Preferred:

- Flutter for a single codebase supporting Android, iOS, and Web

Alternatives:

- React Native for mobile and React for web

You are permitted to use **AI tools, documentation resources, and any framework or approach** you find suitable.

Submission Guidelines

You may submit one or more of the following:

- System architecture diagrams
 - Database schema
 - API flow or system design documentation
 - UI wireframes
 - Partial or complete implementation
 - A README explaining your approach and decisions
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Evaluation Criteria

Evaluation will be based on:

- Effort and depth of work
- Logical structuring and clarity of thought
- Practicality of the implementation approach
- Ability to explain design decisions

A fully complete solution is not mandatory.

Interview Process

- An interview will be scheduled during the 24-hour assignment window.
- The interview link will be shared **30 minutes prior to the interview**.
- Interview questions will be based entirely on the assignment you submit.
- You should be prepared to explain:
 - Your design and implementation choices
 - Trade-offs considered

- Possible future improvements
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Final Note

The purpose of this assignment is to evaluate your **analytical thinking, system design capability, and real-world problem-solving approach**, rather than only coding proficiency.

We look forward to reviewing your submission.