



CANDIDATE ASSIGNMENT FOR TECHNICAL ARCHITECT/ TECH LEAD

INTRODUCTION

Please attempt all the below questions and submit the document back to HR max within two days.

QUESTIONS

QUESTION-1:

Please read thru the below case carefully and respond to the questions listed below in as much detail as possible.

Assume that you have joined as an Architect in a technology start-up that plans to build an Automotive Dealership Management System (DMS). Below are the high-level modules/business processes that the product would cater to:

- Lead Management:
 - Identify Prospects, Upgrade to Leads
 - Assign and Follow-up on Leads
 - Convert into Sales/Service
 - Associated Metrics
- Vehicle & Part Order Management:
 - Plan & Forecast Part & Vehicle Sales
 - Place Orders with the OEM
 - Manage Inventory – real-time location, status, re-order levels etc.
- Sales:
 - Get vehicles that match the customer requirements
 - Accessorize the vehicle
 - Generate a Sales Quote
 - Arrange Finance options
 - Deliver the vehicle to the customer
- Service Management:
 - Maintain Appointments
 - Follow-up proactively for service
 - Generate Service Quote
 - Allocate Parts and Labor
 - Complete service & Deliver Vehicle
 - Manage Warranty



- Finance & Accounting:
 - Manage Payables & Receivables
 - Create & Manage Financial Statements
 - Integrate with Financial Software (Tally etc.)
- BI, Reporting & Analytics:
 - Generate & Present various reports (sales/service/customer value etc.) for
 - Dealership Management
 - OEM Management
- Marketing Content:
 - Upload/Generate content
 - Distribute content
 - Track response

In addition, the usual requirements like a robust search function that does not impact performance, a next gen UI, easy navigability with minimum clicks etc. apply. The plan is to build a cloud-based solution, sold on a pay-per-use basis to auto dealerships, as well as native iOS & Android apps for key functionalities.

With these in mind, please provide your thoughts on the following:

- a) Please create a High-Level Technical Architecture diagram.
- b) At each of the layers in the above diagram, which technology stack would you use, and why?
- c) Which of the above functionalities must be mobile-enabled, and why?
- d) How do you propose to expose the functionality to the mobile layer, and why?
- e) Given these broad-based requirements, and the fact that you need to hire the product development team, what skills (technical and otherwise) would you look for in the resources?

Please ensure that all aspects/factors like scalability, ease of deployment, which parts of your solutions are hosted in the cloud, who hosts those (whether in-house or not, if not, which vendor), performance, maintenance and support, and any other factor you think are critical are considered in your solution, and elaborate clearly.

Best wishes
Team Digilytics!