**ISDS 552**

**Project on**

**Car Dealership (Sales)**

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**By**

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**System Request – Car Dealership Project**

**Project Sponsor:** Car Dealership Business Owner/CEO

**Business need:** This project is to develop a system for a small car dealership in Southern California to improve their business processes such as matching customers with vehicles, tracking sales, inventory management, financing management process, determining salespersons commissions and promotional offers. The data collected through the system needs to be exported into accounting purposes and analytical reporting to improve their services and identify best practices in marketing and funding for higher profit generation.

**Business requirement:**

* Matching customers (online and on-site) with vehicles
* Manage and track the vehicle sale process (including vehicle options/accessories, trade-ins, financing, sales tax and applicable discounts)
* Vehicle inventory management (including buying, selling, and trade-ins)
* Determining Salesperson commission based on their sales (percentage) and promotional offers on weekly basis.
* Record accurate and detailed history reports of all the transactions for accounting and analytical reporting purposes.

**Business value:** The new car dealership system is expected to increase their sales by introducing best practices in marketing, lead generation and competitive car deals, reduce operating cost, manage the vehicle inventory smoothly and most importantly, deliver the best possible customer service experience to their clients and thereby become one of the best car dealerships in the area.

**Special Issues or Constraints:**

* Challenges in migrating old data from current/previous system to the new system.
* Issues in adopting and integrating to the new system.
* Higher initial investment may be needed to develop the system infrastructure. (Hardware and software)
* Cost of licensing the system applications, IT management and staff training.
* Return on investment (ROI) may be longer than expected



**Functional Requirements:**

A functional requirement is the outline of the workflow required by a system. It includes customized requirements to support a system. It may also involve calculations, technical details, data manipulation and processing and other functionalities that system wants to achieve.

**Functional Requirements**

1. Matching customers with vehicles
   1. Online via search function in car dealer’s website
      1. Customer is able to search all the cars present in the internal inventory.
      2. Customers’ personal information is not stored in the database.
      3. The website shows appropriate results based on search provided with discounts and special deals.
   2. On-site by visiting the car showroom
      1. A salesperson will be available to guide the customer.
      2. The system records his/her preferences, links it with customer record and stores it in the database.
      3. The customer can choose from both internal and external inventory.
      4. The customer will be offered a test drive.
2. Sales
   1. A salesperson can do real-time meeting with the interested customer and persuade him to buy the car.
   2. If the car is sold, preparing the invoice for the sales.
      1. Enter the customer and car details.
      2. Trade-in details are entered if applicable.
         1. Evaluate the old car.
      3. Check if customer has ordered accessories (e.g. alarm, ski rack).
      4. Consult the final amount with the manager.
      5. Display the final amount after discounts (if there are any) and sales tax.
   3. Car financing
      1. Ask the customer about all the financing options i.e. lease or loan.
      2. Run the credit history check and eligibility for the loan.
      3. Get all the financing arrangements checked with finance manager.
      4. Complete the process.
   4. Give the customer warranty card and ask about insurance options.
   5. Complete the payment process.
3. Inventory Management
   1. Manage internal inventory
      1. According to the demands and trends update the inventory regularly.
      2. It will contain all the accessories that customers usually prefer.
      3. Keep track of which car is sold the most and least.
      4. Keep a record of trade-in cars.
   2. Manage external inventory
      1. If any part or accessories are missing, check with other dealers.
      2. Check the availabilities of vehicles with other dealers and place the order if you don’t have that car.
4. Determining salesperson commission
   1. Auditing of the number of sales performed by each salesperson for that week
      1. As per the provided percentage, calculate the total weekly sale.
      2. By considering number of sales as the parameter, check if a salesperson is eligible for a bonus.
      3. After the calculation of the weekly report, it is to be forwarded to the financial manager for approval.
   2. Processing of salesperson commission
      1. Based on the pre-decided percentages, the manager approves the commission.
      2. Forward it further to the HR and payroll department.
      3. Along with the base salary, the commission and bonus are given to the salesperson.
5. Determining promotional offers
   1. Internal inventory evaluation
      1. Perform comparisons of weekly prices and sales and also to develop offers for stock clearance.
      2. Encourage the customers for referrals by launching referral offers.
      3. To check if any promotional offers are applicable, send timely reports to the manager.
   2. The inventory is updated by taking into account the seasonal, holiday and also, promotional offers and also if there are any changes in the pricing structure.

**Non-Functional Requirements:**

Non-functional requirements are used to judge the operations rather than specific functions. It is used to check the safety, security and usability during the operations. Basically, it defines how the system is supposed to be as a whole.

**Non-Functional Requirements:**

1. Operational Requirements:
   1. The system must be compatible with any web browser and mobile
   2. The newly designed system must integrate well with the existing system.
   3. Proper backup of the data should be designed.
2. Performance Requirements
   1. There should not be any outage of the system. The system must be up and  running 24\*7.
   2. The response time for the user should be less than a second.
   3. The system should maintain an accurate and detailed historical data of every transaction.
   4. Maintaining backup system in order to support system failure.
3. Security Requirements:
   1. Customer details such as name, address, contact number, card details should be secure and confidential.
   2. The customer details should be editable by the customer and the support staff who are assigned to that particular task.
   3. The system must be protected from external threats.
   4. Training the employees on security awareness.
   5. Monitoring system for any intrusion.
4. Cultural and Legal Requirements
   1. Licensed versions of the products should be used.
   2. There should not be any discrimination based on gender, race, ethnicity, etc.
   3. The system must abide by environmental, federal and state safety regulations.
   4. Professional workplace relationships will be maintained among the employees.